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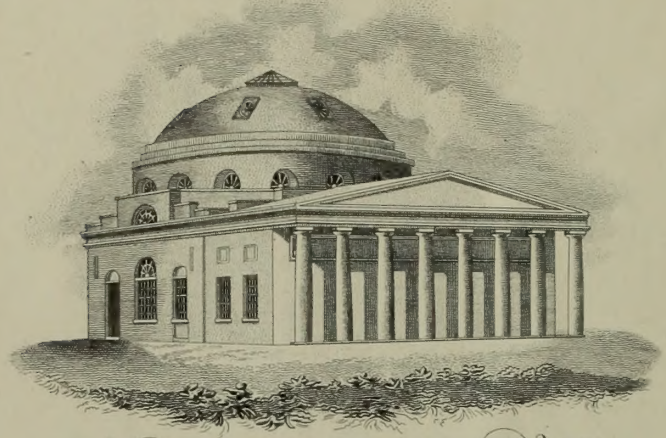

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1812-1867. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were: Richard J. Sellers, Historical Librarian/Preservation Officer; Maria Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harding-Henry, Resources Division; Sarah Hovde, Alice Schutz and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.lib.umaryland.edu) and the Internet Archive (www.archive.org).

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1832,1833

Feinour, Thomas	Epilespy	1832
Foulke, Lewis W.	Injuries of the Head	1832
Calvert, Cecil	Fever	1832
Miller, B. J.	Cancer	1832
Creighton, Samuel B.	Yellow Fever	1833
Howard, Joseph	Delirium Tremens	1832
Houston, Henry White	Malaria	1832
Birckhead, Samuel H.	Asthma	1832
Gray, Reuben T.	Anasarca	1832
McPherson, Samuel	Asphyxia	1832
Gazzam, Edward D.	Puerperal Peritonitis	1832
Nelms, Presley	Pneumonia Biliosa	1832
Magruder, Robert P.	Yellow Fever	1832
Waters, James W.	Cynanche Tonsillais	1832
Blakey, Robert Otway	Dysentery	1832
Butler, John Walter	Modus Operandi of Blood Letting	1832
Brehon, J. G.	On Hemoptue	1832

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Weisel, Samuel	On Hernia Inguinalis	1832
Patheinbridge, John W.	Modus Operandi and Therapeutic Application of Cathartics	1832
Naudain, James S.	Hypochondriasis	1832

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THESES

1832, 1833

Feinour, Thomas	Epilepsy	19p.
Foulke, Lewis W.	Injuries ~~to~~ of the ~~Back~~ Head (partially faded ink)	16p.
Calvert, Cecil~~ius~~ Balt.	Fever (partially faded, ink bleeds)	17p.
Miller, B. J.	Cancer	21p.
Creighton, Samuel B.	Yellow Fever	18p. 1833
Howard, Joseph	~~Delerium~~ Delirium Tremens	15p.
Houston, Henry White	Malaria (partially faded ink)	21p.
~~Buckhead~~ Birckhead, Samuel ~~H.~~ H.	Asthma	28p.
Gray, Reuben ~~T.~~ T.	Anasarca	23p.
McPherson, Samuel	Asphyxia	15p.
Gazzam, Edward D.	Puerperal Peritonitis	67p.
~~Yelms, Preston~~ Nelms, Presley	Pneumonia Biliosa	13p.
Magruder, Robert ~~P.~~ P.	Yellow Fever	11p.
Waters, James ~~W.~~ W.	Cynanche Tonsillais	24p.
Blakey, Robert Otway	Dysentery	16p.
Butler, John Walter	Modus ~~Operanchi~~ Operandi of Blood Letting	28p.
Brehon, J. G.	On Hemoptue	9p.
Weisel, Samuel	On Hernia Inguinalis	15p.
Patheinbridge, John W.	~~Modes Operanchi~~ Modus Operandi and Therapeutic Application of Cathartics	21p.
Naudain, James ~~T.~~ S.	Hypochondriasis	21p.

12

An Inaugural Dissertation
On
Epilepsy

Submitted to the Examination
Of
The Trustees
The Provost & Professors
Of the
University of Maryland
for the degree of Doctor of Medicine
On
the fifth day March 1832
By
Thomas Feinour
of
Baltimore Maryland

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Among the great variety of diseases that affect mankind there are few (if any) which possess more interest in a theoretical & practical point of view, than nervous diseases; every disease is somewhat modified, in its character and Symtoms by this important agent, notwithstanding the great advantage, that would result from a knowledge of the peculiar character of the nervous influence, still unhappily the rays of pathology have shed but feeble lights upon this important and mysterious principle; neither has Anatomy or Phisiology thrown any light upon this obscure subject but still leaves us in the dark, with regard to its precise nature, the phenomena of the Galvanic fluid, and Electricity have been supposed to be allied to those that characterise the nervous fluid, and they have been supposed to be identical, there is nothing however conclusive upon this subject. Indeed the brain, the great centre of the nervous influence, from which it flows as from a common centre to all parts of the system, is shrouded in some deep and impenetrable obscurity. There has not been wanting Hypotheses and vague conjectures to explain the whole mystery, yet after an—

an attentive examination of them and admiring the simple beauty of their contexture, we perceive still that we have advanced but little further in our knowledge, it is not probable that the veil which excludes the light of investigation, will ever be drawn aside, but it must forever remain a profound mystery. Epilepsy, is one of the most interesting of the nervous diseases, it has attracted the attention of medical men, and the World at large, from the earliest period, The ancient Greek & Latin authors have written particularly upon Epilepsy and described its symptoms with great precision notwithstanding all that has been written both by ancient & modern authors, the nature or proximate cause of the disease, still remains unknown, and its cure difficult and uncertain. Epilepsy has been distinguished by a great variety of names, such as Morbus sacer comitialis Herculeus and caducus, it has been supposed that it was called sacred on account of the magnitude of the evil, it being common to call every thing great by that name or because it is cured by Divine rather than human powers, or because those who were afflicted by it were believed to be possessed by demons, it has been also called Herculeus, because Hercules was subject to it, or on account of its greatness or power. It was denominated Comitialis because it sometimes occured in assembles, called comitia, where the passions of the people were supposed to be roused, by which it might be caused, or on

account

account of the Comitia being dissolved when any person was affected by it. the reason of its being called, Caducus, or falling sickness is obvious, a fit of Epilepsy, may be described to be a paroxysm of convulsions, attended with loss of sense, and voluntary motion, and followed by drowsiness or complete sleep; like Apoplexy, the attack may be sudden or it may be preceded by certain premonitions, such as headache, pulsation of the Carotid, and temporal arteries, Vertigo tinnitus aurium &c sometimes it is preceded by flashes of light, appearing of a blue or dark Colour or various colours mixed together, as in the rainbow, or distention of the Vessels of the head accompanied with nausea & vomitting, it is also preceded in some cases, by a slight alienation of mind, persons are sometimes, affected with a vapour, of the smell, or flavour of musk with pain in the bowels, with loosenss with difficult speech with obscurity of sight & coldness of the extremities, besides these circumstances and symtoms which warn us of the approach of an Epileptic fit, persons frequently experience a remarkable sensation which has been described to be like cold air, blowing on the part affected, hence it has been called the Aura, epileptica, by others, that of Water running from different parts to the head or to the sense of insects creeping from the extremities, upwards denominated formicatio, the aura, is the most remarkable, precursor of the disease and is immediately followed by a paroxysm, it is described by

all-

all authors. Sometimes Epilepsy makes its attack without being preceded, by this or any other percursory symtom, when the patient suddenly falls down in a state of complete insensibility; he neither sees nor hears, or has any consciousness of external impressions, however powerful they may be; The most powerful irritants produce no effect,- Voluntary, muscular motion is abolished, The Muscles, being no longer obedient to the will, involuntary Muscular power remains however & is sometimes violent & powerfully exerted, Doct Good thinks that in some instances a degree of consciousness & perception remains throughout the paroxysm, but he says the exceptions are few, and are not sufficient to disturb the general rule; The powerful Contractions of the Muscles & particularly those of the face, are sufficient to amaze & terrify the beholder, The body is sometimes thrown forward to such an extent that the Chin touches the breast, and is drawn back again with considerable force, The Eyes are reverted or so distorted that the white part of them only can be discerned, the tongue is thrust out of the mouth & covered with frothy saliva, sometimes horribly lacerated & torn by the spasmodic contractions of the muscles of the jaws, which shut the teeth together, and occassionally with great violence, The face is pale or blue, sometimes of a livid hue or quite black, The different muscles of face which express the various & opposite emotions of the mind are thrown into violent

and

involuntary, spasmodic contractions & together with the gnashing of the teeth, the foaming of the mouth & the horror of countenance, give to the patient, a wild & some have fancied a preternatural expression, which has given occasion to the opinion, that the person is possessed, or in the language of Scripture is truly an evil spirit. The vital & natural functions as well as the animal are considerably disturbed, The heart palpitates, respiration is laborious & sometimes stertorous and the pulse irregular. The secretions & excretions also suffer derangement the bile, is ejected in considerable quantity, & the mouth filled with thick & viscid saliva, These are the circumstances which not unfrequently, have attended a paroxysm of Epilepsy & are by no means exaggerated besides, cases are related where the fit was ushered in by a whirling motion of the body, & a remarkable Case is related of a Jewish Woman, who had her tongue alternately contracted and elongated & thrust out into a sharp beak & drawn back with such rapidity, as to make the beholders giddy, In some cases on the incursion of Epilepsy, the Eyebrows are violently contracted, as when a person is disturbed with anger and the patient utters loud shrieks & fearful cries - sometimes the forehead and the scalp is convulsed & the hair stands erect. In the commencement of the paroxysm the face is red but during its progress it becomes livid or pale, the vessels of the neck are distended & the voice like that of a person almost suffocated, The respiration being thus impeded the blood cannot be transmitted through the lungs, but collects about the right

ventricle

ventricle: the superficial veins become turgid with blood,
particularly those of the Neck & face, and the jugular veins, hence the
dark colour of the face, Sometimes the face becomes swelled & affected
with ecchymosis The circulation is affected differently in different
cases, The heart palpitates & the pulse is irregular & almost always
quick, during the advance of the fit however it becomes fuller
and sometimes languid & feeble, The convulsive action in this disease
varies considerably in different cases, It is sometimes so violent as
to break the teeth & the jaw, has been frequently dislocated, indeed
in epilepsy the Muscles may exert the various motions, which
they are capable of performing when in a state of health & obedient
to the will, Boerhave remarks there is no gesture, distortion or
posture, which epilepsy has not sometimes represented, The
symptoms above described as in the paroxysm sooner or later
gradually give way, The convulsions become less violent, the
respiration more free & the pulse is slow full & regular, the
countenance more composed & the patient falls into a state of
somnolency or profound sleep an awakening from which he returns
to his natural state wholly unconscious of what has happened, Epilepsy
not only varies in its form and degree but also in the duration of its
paroxysms & its period of recurrence, A Paroxysm may last for a few
seconds or minutes or many hours. In the case of a girl, the fit,
though not very strong, lasted for fourteen hours, The period of its return

varies

varies also in different cases, in some persons they are seldom regular however they sometimes recur every day, or every week, month or year, at every new or full moon, in the spring or autumn but generally speaking the intervals are very uncertain, Cases are given of its recurring two or three times in the course of twenty four hours, Dr. Gregory thinks that when the paroxysm occur oftener, than once during the day it is not genuine Epilepsy, but considers it a disease of an hysterical nature, The terminations of Epilepsy are various, it sometimes terminates in Apoplexy Sometimes in paralytic affections especially of the nerves concerned in vision & hearing: but its most common termination is in idiotism or fatuity. The faculties of the mind, the judgement, the memory and the imagination gradually fail & a total imbecility supervenes. If the disease has continued for a length of time even in the intervals, the patients sufferings are great He becomes languid & dejected, he shuns the society of man time brings no alleviation of his sufferings, he is oppressed with watchfulness & if he sleeps, he is disturbed with frightful dreams, he loathes his food & digests with difficulty, his countenance becomes of a leaden hue and he drags on a miserable existance in pain & ignominy, being sometimes driven even to Madness by the violence of his sufferings

On the dissection of different persons who have died of epilepsy various appearances, have been observed & detailed with great

minuteness

minuteness, although sometimes no morbid disease has been discovered in the brain, the most important of them however have been found to be organic, disease of that organ and its investing membranes diseased of the bone, exostoses, effusions of serum turgescence of the brain hydatides in the Vessels of the plexus choroides & other chronic disorganizations, Doctr Gregory's is of opinion that these and similar causes of epilepsy are rare in comparison with those which are wholly the result of a morbid action, in many, of which we may reasonably hope to produce alleviation & in a few Cases complete cure, The brain properly so called has been always supposed to be the principal seat of disease, in epilepsy, but Mr Wenzle professor of Anatomy & Physiology, in the College of Mayence in a very great proportion of heads, which he examined found that Organ in a healthy condition & the Cerebellum uniformly and to an extraordinary degree the seat of disease In fifteen cases out of twenty, the brain was uninjured, but of the other five, in two Cases the meninges were diseased, & in the remaining three, there was effusion softening and enlargement of the brain The parts that were found principally diseased were the pineal gland and the cerebellum, the former often & the latter invariably injured in a greater or less degree. Besides the diseased appearances found within the cranium after epilepsy various lesions have been observed in different parts of the body particularly in the heart, the lungs, the liver, the Stomach and the

intestines

intestines, almost all Writers upon the Subject, notice Worms
found in the intestines, on dissection after epilepsy, These are
mostly the Morbid appearances after epilepsy but it is
proper to remark, that in many instances, no disease whatever
has been found, either within the Cranium, the, thorax
the Abdomen, or any other part of the body; Epilepsy has
been made into various distinctions and classed differently
by almost every author, Doctor Cullen considers it as a
Genus of the order Spasmi & divides it into Idiopathic
and symptomatic, each including several species, first, the
Cerebral sympathetic & occasional the second containing a
great number, according to the diseases with which it may
be connected or by which it may have been caused, The causes
of Epilepsy, that have been mentioned are very numerous and
they have been distinguished into those which are predisposing & exciting
& occasional, Among other causes of Epilepsy some writers
have mentioned, a supernatural agency and influence of heav
enly bodies, Many of the ancients, were of opinion that Epilepsy
was sometimes, thus produced, and some learned men have
believed that the persons represented in the Scriptures, as possessed by
Demons were epileptics, with regard to the Predisposition, to
Idiopathic epilepsy, nothing distinct or certain is known
of the great, Obscurity in which the functions of the brain

and

and nervous system are involved renders this subject a difficult point in the pathology of epilepsy; We are unable to discover its nature or even its existence, in many cases whether or not it be necessary to the production of the disease some writers are of opinion that it is not necessary, that the disease may be produced by any new & powerful impression in a perfectly well organized brain & nervous system. There can be no doubt that some persons possess greater sensibility or what Doctor Cullen calls mobility of the Brain & nervous system than others, which may Constitute the predisposition to the disease We see some persons easily elated by hope & depressed by fear, susceptible of strong emotions from the slightest causes and we find that the disease is excited in some persons, by causes which will not produce it in others, A certain conformation of the head seems to predispose to Epilepsy, the heads of Epileptics, being much larger & the scull thicker than in healthy persons, epilepsy is often hereditary, being transmitted from parents to their offspring, Women & Children & others of a Weak and delicate habit of body are said to be especially liable to this disease, but the alleged fact is not universally admitted, others assert that Epilepsy more frequently attacks Men than Women, Men of great genius & talents have been afflicted with the complaint, & those who have suffered from it in Youth, we have instances of the kind) have risen in maturer years

ears, to the highest honours, of the state, & been distinguished, as
reat Orators, Poets & Statesmen, almost all writers have placed
lethora, among the predisposing causes of epilepsy; that plethora
frequently connected with this complaint, no person can reasona
y doubt. It frequently prevails in the spring & fulness of habit
as been observed as one of its most frequent Causes, & distinguished
riter thinks that this state of body may so effect the soundest
rain, as to produce the Epileptic disposition. It occurs however
every variety of habit from the most perfect examples of the sanguine
the most mark'd melancholies. Habit is mentioned among the
redisposing causes of Epilepsy, when the disease has been produced by
trong impressions, a disposition to future paroxysms is created, even
om the slightest causes. The exciting or occasional causes of Epilepsy
e of various kinds some are stimulating in their operation & others
re sedative, The former producing it is supposed an increased action
r energy of the brain & the latter diminishing that action
Of these causes some act directly upon the brain others produce
heir action first upon distant parts & secondarily upon the brain
Among those which act primarily upon the brain, the chief are
Mechanical causes such as malconformations tumours, depressed
one sharp pointed Spicule & injuries of the cranium, hydatid
congestions, distending the Vessels of the brain and effusions of
arious kinds, These causes appear to act mechanically, either
y stimulating or compressing the brain, also chimical fluids
odged in certain parts of the brain which become acrid by
tagnation, are said to excite the disease, The causes which also
roduce, their action primarily upon the brain, but probably

by

by sedative operation or diminishing the energy of that Organ, are those which effect the mind, These are the depressing passions, fear, terror, or grief, disagreeable impressions on the imagination & senses, the recollection of former Paroxysms, or their causes, Doctr. Potter says fear, acts as a direct sedative terror & horror, by directly stimulating the system lead to indirect debility; so that both classes of passions equally predispose to Epilepsy, Whatever greatly weakens the action of the heart, as hemorrhage or excessive evacuations predispose to Epilepsy by their sedative operation The suppression of Cutaneous eruptions or evacuations to which the body has been accustomed, has sometimes given rise to it - it is sometimes connected with diseased state of the spinal marrow & with injury & Morbid state of the nerves, Among other causes producing epilepsy by acting first upon other parts & secondarily upon the brain, irritations of the stomach & intestines, are mentioned, That irritations of the Stomach will produce epilepsy we may reasonably believe when we reflect that the Viscus, has great many nerves from the Par Vagum & intercostale, It, is an organ too, exposed to a great many irritating causes which may, by causing excitation of its nerves produce a disordered state of the functions of brain, & the causes may be acrid, solids Worms & indigestible food, Biliary concretions & calculi in the kidneys or bladder, have occasionally given occasion to Epilepsy; certain mineral poisons particularly lead, Arsenic & muriate of barytes, have in some instances produced this disease, and it is sometimes connected with certain exanthemata with painful dention with pregnacy & parturition & with the state of body during sleep, Epilepsy, very frequently alternates with apoplectic & paralytic affections, It not only frequently arises

arises from local irritation, but is often Connected with several
visceral morbid affections particularly those of the Abdominal
and pelvic Viscera, The visceral diseases connected with epilepsy
are those of the intestines & Stomach the liver & the Uterus, The
Epilepsies connected with these Morbid affections are distinguished
by the names of gastric intestinal & Uterine Epilepsy, The epilepsy
connected with the functions of the Uterus, Chiefly affects
young females of Sanguine temperament & occurs about the
age of Puberty or when the Catamenia have taken place
naturally & have been suppressed, There is nothing peculiar in
the Character of the fits of Uterine epilepsy that distinguish
es, it from the fits of Epilepsy from other causes, The pathol
ogy of epilepsy, is very obsure, a great variety of theories have been
offered in illustration of this subject but none of them are
very satisfactory, The ancients believed that the immediate cause
of the disease is a pituitous humour in the Ventricles of the
brain & the symtoms were produced by an effort of nature to
relieve herself from this pressure; A modern writer thinks
there is every reason to believe, that the proximate cause of
Epilepsy Consists, in a temporary local turgescence of the cerebral
vessels: Some believe the proximate cause, to be a diseased State
of the parts within the Cranium, The diagnosis of Epilepsy
is not very difficult. The only disease, with which it is liable
to be confounded is histeria, from which it may be distin
guished by the foaming at the mouth, Gnashing of the teeth
the horror of Countenance & other terrific Symtoms, together
with the termination of the fit in Sleep & the common Symtoms
of histeria not being being present, such as the Globus
histericus, the involuntary laughing or weeping, and the

palpitation

palpitations of the heart, In making the prognasis in epilepsy
the age, Sex constitution & habits, of life, of the patient, are to
be taken into consideration, where there is reasan to believe that
the disease, depends upon the Compressing Causes, above described
such as tumours effusions & Spicculæ of bone, the Case may
be considered as almost hopeless when it occurs early in life or
while before the time of Puberty, it may be sometimes cured
by the effort of nature or by Medical treatment, When the
disease is hereditary Some Writers consider it altogether
incurable, In females this complaint is often remarked, by the
appearance of the Menses, by Marriage or during Pregnancy
When the disease is of long duration, the hope of cure is small
The Sympathetic epilepsy is more easily cured, than the Idiopathic
Marriage is said to be a cure for general Epilepsy, but it aggravates
that arising from other causes, Generally speaking When the
disease occurs, in young Subjects and the Constitution is
pretty good, when the Paraxysms are not violent, but the intervals
of Considerable length & the exciting Causes are obvious and
removable, such as Worms & irritations of all kinds in the Stomach
& intestines, the greater is the probability, of its removal, In
the treatment of Epilepsy a great variety of remedies, have
been tried & many of them highly extolled for their virtues in
this disease, Indeed some have been recommended with confidence
& success, The Mistletoe was at one time given with as much reliance
as the Bark, in intermittent fever,, but after all there is no remedy
which can be considered as specific in this complaint, In former
times, when the disease , was held in superstitious awe, expiations
& incantations were resorted to & relief frequently obtained.*
When the accession of a paroxysm of Epilepsy, there is no

medicine

medicine that can be of any service,, Our attention must
be directed chiefly, to the prevention of injury which the patient
may inflict on himself, or upon the assistants, by restraining, the
convulsive action, when Violent, The patient, should as soon as possible
be laid on a bed or sopha & such parts of the dress removed, as
may press upon the Vessels of the Neck, It frequently happens
that the tongue is lacerated, by spasmodic contractions, of
the muscles of the jaw, in order to guard against this accident
a piece of cork, Wood, - or a handkerchief properly rolled up
should be introduced between the teeth, Some have recommended
bleeding in the fit, on the supposition that the brain, was over
loaded with blood, & to shorten the paroxysm emetics,
fermentatories, frictions & stimulating applications of various
kinds, have been advised, These remedies are for the most
part useless, if not dangerous, bleeding appears to be of little
service; during the Paroxysm, & it would be almost impracticable during the general convulsive muscular action,
on the recovery of the patient if he feels disposed to sleep it
may be encouraged, & When he awakes if he complains of much
languor, mild Cordials, are to be given him, however in the
generality of Cases, the symptoms are very mild & scarcely
require any thing to be done, In the treatment of Epilepsy
the chief indications are in the intervals of the fit to correct
if possible the predisposition to their return & to remove or
weaken the power of the exciting causes; When the disease is
preceeded by head Aches, Vertigo & a confusion of intellect
in a person of a full habit & subject to Epilepsy we ought
immediatly to employ the means of speedy depletion, This may
be accomplished, by Copious blood letting & active purging

When

When the symtoms are very urgent especially in a strong
nstitution, blood may be taken both generally & locally & in
nsiderable quantity, The patient should observe a low diet
d proper exercise, the restoration of discharges that may have
ased are important & these may be assisted by blisters
ctions & issues, the most speedy & powerful depletion is
oduced by blood letting & purging and in all cases of
ilepsy connected with plethora they are the most effecient
medies. In favour of this practice, under these
gumstances the opinions of the most able Physicians might
adduced, A discharge from the neighbourhood of the
ad kept up for a length of time seems in some cases, by diminishing
e Plethora to have prevented the Epileptic paroxysms & an
hen issue may be the means of determining occasional turgescence
such places & diverting them in some measure from their action
pon the brain they certainly may be useful in many instances.
e restoration of discharges to which the system has been accustom
particularly when the disease has followed the suppression of them
ould always be attended to, Where the menstrual or hemor-
hoidal discharges have suddenly ceased, they should be
mmediately re-established, by blood letting pediluvium &
other means, that are recommended; In Epilepsy attention
ould be paid to the state of the perspiration which is often very
egular, the skin being sometimes affected with spasms &
nder these circumstances, the warm bath should be used:
henever there is too great a determination to the head, the
arm bath should not be employed, When Epilepsy seems to
epend upon debility, the plan of treatment should be different
rom that above mentioned, In these cases depletion by free

bleeding

bleeding & cathartic's would prove injurious, the bowels however
should be kept gently open & if there is much determination to the
ead topical bleeding may be moderately employed Tonic's and
ntispasmodics, have been very generally recommended in
his variety of Epilepsy. of which we have a great many, Among
hese cold in a moderate degree, exercise in the open air, and
generous diet may be mentioned, The cold bath has been recommended
if it must not be used if the Vessels are overloaded with blood or
patient be affected with extreme sensibility & irritability
Constitution, Doctr Cullen considers fear or some degree of terror
being beneficial in some cases of Epilepsy, There is a case, related
a Lady of robust habit of body, who had been affected with
his complaint for four years, the paroxysms returning three or
our times a week, continuing for some hours & leaving the patient
a State of Stupor, A great variety of remedies had been used
vain & the case was considered as hopeless, when on recieving
dreadful mental shock by the circumstance of her daughter being
ccidentally burnt to death, the disease entirely & finally left her
The principal tonic Medicines are vegetable astringents
nd certain metalic preparations, Among the former bark & bitters
ave been given with peculiar advantage, Dr. Home relates the
se of an eleptic who was nearly reduced to fatuity & whose fits
came very slight & returned but seldom on taking the bark
The leaves of the Orange tree have also cured many cases, The
irtues of this remedy have been highly extolled in Epilepsy
Among vegetable astringents recommended in Epilepsy, the viscus
uercinus Misletae has held a conspicuous place,
A great many cases of its success in Epilepsy are related
Doctor Cullen, thinks that when given in large quantities

it

it may possibly be useful but he believes it was more especially in ancient times when it was an object of superstition, The general opinion appears of late to be unfavourable to the misletoe it is now wholly neglected, The Metalic tonics principally employed in Epilepsy are silver, zinc Copper lead, arsenic & mercury Silver in the form of the Nitrate of silver has been distinguished Epilepsy. It is taken in the dose of one eighth of a grain three or our times a day & increased to 15 grains when continued for some me, It colours the rete mucosum of a dark hue it sometimes sts for many years, although the nitrate of silver has been uccessfully employed in Epilepsy by many practitioners, it has een given by others in large doses & for a considerable time, ithout the smallest advantage, When given untill it produces iscoloration of the skin it has been supposed by some to be more fecacious this may probably be the Case, as the change of lour clearly shows that the remedy has affected the constitution he preparations of Zinc have been considered very useful in pilepsy, The Cuprum ammoniatum has also succeeded, given in the dose of quater of a grain two or three times a day radually increased, Doctr Rush gave the ascetate of lead several cases & with complete success, Tin has been success lly given in Epilepsy especially to children, where there as reason to suspect the presence of Worms in the stomach intestines, Doctr Fothergill gave it in the form of filings th conserve & syrup, sometimes with the decoctions of e valerian & misseletoe Mercury has sometimes been used ith success in Epilepsy, Doctor Potter says it has succeeded when the disease seemed to depend upon a congested excited state of the brain, He says he has seen two Cases

cured

ured by salivation & two by a supervening gout,
e tartrite of Antimony given in nauseating doses, has
id a beneficial effect, It may be prescribed, alone or in
mbination with Mercury, Arsenic in the form of
awlers solution has been given in a few Cases in Epilepsy
n the cure of Epilepsy connected with debility, antispasmodics
d narcotics have been recommended either alone or with
e tonics above mentioned, The chief antispasmodics are
alerian, musk and ether, & the principle narcotics, are
hium, hyasociamus, Stramonium & digitalis, They have
ll been considered useful in Epilepsy, Galvanism has
en also recommended as a remedy in Epilepsy & it is
id to protract the fits, but cannot be said to cure it
il of turpentine has been successfully employed in Epilepsy
articularly those connected with worms, Pressure made
hon the Carotid arteries has averted a paroxysm & the
rotids have been tied for this disease, with success,

An
Inaugural Dissertation
On
Injuries of the Head
Submitted to the Provost, Trustees,
and Medical Faculty.
of the University
of Maryland
for the degree of Doctor of Medicine
By
Lewis William Wolbert of Carlisle
Pennsylvania
March
1830

It is not my intention, in selecting "Injuries of the Head" as the theme of this paper to embrace all the affections which Surgical writers include under this head. A plan so extensive would be entirely incompatable with the ordinary limits of an inaugural dissertation. The Cranium contains one of the most important organs in the human body: an organ essentially concerned in the preservation of health and life, and serving also as the great center of the intellectual principle; it is therefore an object of the highest importance to avert the

the mischief to which it is liable from various injuries, by a well directed plan of treatment.

In the following pages it is my design to treat, 1st of injuries of the cranial integuments and 2dly of Complexion.

In viewing the anatomy of the integuments of the head we first observe a membrane covering the bones of the cranium, it is called the pericranium; it is thin, fibrous, very vascular, of a firm texture, immoveable and closely adhering to the bone at every part; upon this the tendon of the occipito frontalis glides, being connected with it by loose cellular tissue, enabling it by the action of the muscles to move the integuments of the head: upon this tendon lies the cellular tissue, which is more dense in this region than in any other part of the body and very intimately connected with the skin; causing a frequent combination of Phlegmonous

and

and Erysipelatous inflamation; and if any vessel should be wounded or divided, it cannot retract or contract so as to stop the Hemorhage which would take place.

Ordinary contusions of the scalp require merely a mild treatment to prevent inflamation. If ecchymosis occur discutients ought to be used to promote absorption and produce resolution. The tone of the vessels being injured, weakened and distended; applications which will stimulate their action, will be beneficial: as, cold, which is a powerful astringent, moistening the contusion with a solution of acetate of lead, muriate of ammonia, or ardent spirits, leaving the head uncovered to promote evaporation. a few doses of any of the saline purgatives will prevent constipation and depress arterial action; attention to diet for a few days and rest are often necessary.

If the integuments be cut or lacerated, all foreign substances and coagulable blood must be removed and the edges of the wound neatly adapted to promote union by the first intention; for this purpose adhesion straps are used. I may here mention the application of a strap used by Professor Smith of the University of Maryland, by it we can employ any force to draw the edges together and observe through the threads whether they are perfectly coaptated, it is particularly applicable to wounds of the face, to prevent an unseemly scar. I used it in the case of a boy last summer who had the integuments on his forehead cut irregularly to the extent of two inches, by the kick of a horse, the fourth day the wound had healed and left but a slight mark. If after the fourth day union has not taken place, the straps must be removed and emollient poultices used to promote suppuration, followed by plasters of simple

Create a basiliken, but sometimes owing to disturbance of the general health the parts will not heal and there follows an Erysipelatous inflamation. Dr Samuel Cooper thinks this kind of inflamation more likely to follow wounds of the integuments of the head than any other, the cause of which is, as advanced by Desault and Bichet that the hepatic function soon becomes deranged and altered, producing a state of constitution favorable to its occurrence, requiring in its treatment the abstraction of blood, where the pulse indicates it; the administration of blue pill, one grain three times a day, to act upon the liver and alter its secretion, the neutral salts, abstemious diet and rest constitute the additional remedial agents.

2nd of Compression.

Compression is a diminution of the apparent bulk of the brain by pressure arising from two causes - 1st from extravasation or effusion of blood - 2nd from fractured and depressed bone.

1st Compression from Extravasation.

generally takes place after a period of sanity has intermitted between the time of receiving the injury and the full appearance of the symptoms. It consists of a rupture of some of the vessels in the cranium and an effusion of blood between the coats or in the substance of the brain. The manner in which effused blood operates is by diminishing the tone or power of action in those vessels with which it is in immediate contact; consequently the accustomed supply of blood to the brain is prevented; and if it requires a certain quantity of blood circulating in the brain to produce a healthy and perfect action, that action will be altered and lessened in proportion to the

diminution of the regular supply of blood.

Symptoms. There appears some variety of opinion concerning the symptoms. Dessault says, that the train of symptoms usually related by surgical authors are the result of extravasation, and not symptomatic that it is in progression, as we might be led to infer from the opinions of Bell, Gooch, Gibson and others. He considers each of the symptoms separately, and proves, that not one of them can be depended upon; for all may arise from other causes. The most common symptoms, are, insensibility, coma, sometimes delirium, dilitation of the pupil, countenance flushed, stertorous breathing, convulsive tremors and sometimes paralysis, nausea, sickness and vomiting, involuntary discharge of faces, incontinence of urine, pulse slow, labouring, full and heavy, when there are insensibility

and coma; but pulse and embarrassed respiration with delirium. Mr John Bell says the pulse pauses at every fifth stroke and that the patient is rarely if ever insensible; Post mortem examinations have shown one hemisphere of the brain pressed by effusion and yet the patient has retained his senses to the last. He says the patient is pale and motionless, eyes shut, tossing about in bed and if roused will answer a question correctly and again relapse into stupor.

Mr Dooley is of opinion that if the patient walks some distance after receiving the injury, becomes insensible with the accompanying symptoms; we may be almost certain of compression.

Treatment. First of the application of the Trephine, of which there exists much difference of opinion. The Olden Surgeons were decidedly in favour of its application in all cases; but the experience of

modern days in Surgery, as a general rule is altogether opposed to it. Before its application the exact situation of the extravasated fluid, ought, if possible to be ascertained; whether within the Dura Mater, external to it, or in the substance of the brain itself. As it not as often in one place as another: How then are we to ascertain its situation? Mr Abernethy says, we must scrape the bone and if it bleed we not fear effusion; but if not, there effusion under the point upon which we scrape; this rule has succeeded in some cases; but Mr Dorsey relates cases of its failure, consequently it cannot be depended upon. Desault testifies from experience, that on the one side, how many fractures does the examination of heads discover without any kind of effusion; and on the other side, how often does effusion take place without any fracture, or in very other place than

that where the fracture existed, he was not inclined to use the Keyline unless the nature of the affection indicated the injury of the brain to be such, that all other means would be superfluous.

Mr Cooper is of opinion, that the Keyline should only be used to remove such pressure as gives rise to existing symptoms of a dangerous tendency and not as preventive of such symptoms taking place.

Mr Sorrell advocates as a substitute repeated bloodletting.

Mr Kennen, says. by the Lancet, purgatives and cold applications to the part and rigid abstinence; the Surgeon may prevent infinitely more fatal events, than he ever can by the most dexterous use of the Keyline.

Bloodletting. In this disease the abstraction of blood is one of the most important and effectual remedies; but in relation to its propriety and quantity we must

take into consideration the age, constitution, temperament and habits of the patient, together with existing symptoms and be careful not to carry the bleeding to too great an extent, lest exhaustion and its various train of evil effects be produced. Dr Marshall Hall in a late treatise on the effects of the loss of blood, has shown that this formerly and simple remedy is often carried to so great an excess as to produce very deleterious consequences; but in the hands of the judicious it is a remedy of incalculable utility. The effect produced by bleeding is to lessen the action of the heart and arteries, consequently the function of the secreting vessels, thereby promoting the action of the absorbents. The propriety of its use, is indicated by a flushed face, a full and embarrassed or a hard and tense pulse. It is taken from the arm with the finger on the pulse and so soon

as a decided effect is produced, the arm should be tied up. as an auxiliary leeches are highly recommended; also cold applications beneficial to aid in obtaining excited action.

Purgatives. are highly useful, indeed they cannot be dispensed with: but there may be a difference of opinion whether they should be mild or active; the stupor and coma of the brain being urgent and the connection between the brain and digestive organs intimate, these will consequently become inactive and require drastic purgatives; but active purgation by its irritating action on the alimentary canal and particularly on the lower and larger intestines may produce a disturbing and harassing diarrhea, which will soon carry the patient irrecoverably beyond our reach; therefore those which are aperient: but not acrid should first be used and if they do

not produce the desired result in a gi-
ven time, the more action should be
employed; the sulphate of magnesia
or soda or the cathartic mixture of
salts and senna combined, will
generally be found sufficient
to keep the bowel's soluble.

Diaphoretics. The more urgent
and serious symptoms of infla-
mation being arrested in their pro-
gress and partially subdued by the
more active antiphlogistic treatment;
it may then be beneficial to promote in
sensible perspiration by the use of dia-
phoretics; for if there be constriction of the
cutaneous exhalents and cessation of
their function, health cannot be res
tored. And it is the opinion of Dr James
Johnson that the sympathetic connec
tion between the skin and liver (which
he titles "cutaneo hepatic"), is so intimate
that one cannot be disordered, without

bringing on a consequent deranged condition of the others; and as in consumption the function of every organ in the body is more or less altered in its action, the shock to the system being so great, the cutaneous tissue becomes constricted dry and hot, to alter this state and restore healthy action, the administration of antimonials would be beneficial by causing nausea, relaxing the cutaneous follicles, carrying off the watery secretion of the blood and lessening the action of the heart and arteries.

Diet - The aliment taken into the system should be mild and unirritating, merely to support the functions in their healthy action and not to generate blood rapidly, as, rice, sago, tapioca, toast or barley water and flax seed tea &c-

Rest. When the patient is first placed in bed, the room should be darkened and kept so, and all conversation among those in the room or with any thing that would in the least disturb.

2d Compression from depressed bone. The symptoms are similar to those of effusion, except that they occur immediately after the injury and are more immediately and partially relieved by the elevation of the depressed fragments, which if the fracture is stellated, can be done by sawing off one of the fragments by Hey's saw and in the opening thus formed, a bur may be admitted to raise the other portions of bone; or if the fracture is not stellated, it will be necessary to operate with the trephine, which is applied on a trim portion

of the bone, the integuments being first divided by a bisected incision and dissected upon the bone; but not any portion removed, so that after the operation the edges may be perfectly adapted and treated as an incised wound of the head; the general treatment being similar to that of Contusion.

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An

Inaugural Dissertation

on

FEVER

Respectfully Submitted to the
consideration of
the
Provost, Trustees, and Medical Faculty
of the
University of Maryland
for the
degree of Doctor of Medicine
by
Cecilius Bal.t Calvert
Maryland

1832

To

Richd Wilmot Hall M.D.

Professor of Obstetricks and diseases of women, and Children, in the University of Maryland

Dear Sir

For the pains you have ever taken to instruct me in the pleasing paths of Medical Science; for the sentiments of esteem I bear you as a professional Character, and still more for your parental kindness towards me, I beg leave to offer this imperfect production. If it be in any respect worthy of your approbation it will be productive of the most sanguine happiness to

Your Friend

And Pupil

Cha Balt Calvert

An address to the Faculty of the Maryland University

Gentlemen

The time has now arrived when the Candidate for Graduation must hand in an inaugural dissertation on some Medical theme. When I reflect that I appear before your distinguished talents and polish taste, I should shrink under the task imposed upon my feeble powers Were I not convinced this Protean theme would claim your kindly. That you would pardon an unskilful pilot should he be led by enthusiasm boldly launch his bark on the Sea of science. or stem the straits of Messina fearless of a Scylla or Charybdis. Should I hereafter arrise to any eminence in Medical Science then will I take a retrospect and with a benign smile will I say this is in part thy work

Yours respectfully

the Author

FEVER

Oftener under this garb are we visited by the destroying Angel than any other, Miriads have perished by its ravages and others left lingering to mourn over the inevitable ruin to which all animated nature is incident. None is exempt, It spareth not natures fairest works

Pauperum tabernarium regumq:
Terium comes est.

We are ignorant as to the origin of fever, It was no doubt a companion of Adam while he enjoyed the pleasures of Terestial Paradise, The Romans trembled at the appoach of fever and offered up prayers to the temple of Fanum And Horace called all diseases simply fevers when they rushed out of Pandora's box.

Most writers differ in Opinion respecting fever, Many theories have been put forth and strenuously defended and many have had their zealous followers. Theory after theory have succeeded each other like the waves in a Storm each retiring to give way to another equally un=stable—

Fever has been defined by some to be a morbid increased action of heart and arteries accompanied with frequent or quick pulse chillings &c. But as there may be fever without either of the above symptoms. We think it better to define it to be a breach of continuity in the solids soft, caused by morbid excitability acting on the nerves, and accompanied with one or more of the above symptoms—

Fever is divided into Idiopathic and Symptomatic, We are not aware of any Idiopathic fever believing all forms of Pyrexia to arise from some local cause or other some cause acting on some particular part of the body and from thence radiating over the system. We think were the whole human fabric to be attacked by disease at one and the same moment the shock would be so great as to destroy every vital principle, Some part must always be primarily affected although that affection may rapidly radiate throughout the system enveloping member after member, the human body being composed of sympathising organs and of such harmonious action that the moment there is a lesion of parts its morbid impression becomes diffused throughout the

system

System producing its effects according to the force exerted and Organs affected creating either a local or general fever Much also depends upon predisposition, peculiarity of temperament, habit of body, state of mind, and certain conditions of the Atmosphere—

(Dr Eberle in his late work on the practice of Medicine Makes fever and inflamation as two very distinct things. he can draw no line of demarcation between them but considers local fever as inflamation and inflamation as local fever)

Broussais contends that irritation and inflamation from whence all sympathies radiates act first on the Stomach and alimentary canal, hence Gastro-enterites is his fonset origo of febrile phenomena, he also says that this may invariably be found and proved by autopsic examinations but should there be no inflamation present at the time of this examination he then avers that a change has taken place either in articulo mortis or post Mortem. Such the foundation on which he has erected his theory, which we think far less substatial as a basement than the shaddow of a shade, weaker than the faintest Echo of the female voice, yet is more destructive than was the Lernean Hydra—

are

Are not the mucus membranes lining the cavities as susceptable of Morbid impressions as that of the alimentary tube, if so Why does it not act on the bronchia and lungs primarily in what manner can it be brought directly in contact with the villous coat of the Stomache it Must be transferred to this tissue by Nervous intervention and communication if it ever gets there, which it ought seldom to do if properly treated, Here I might be called on for a proper plan of treatment. My answer is, that a cure cannot be More correctly or More beautifully Elucidated than it has been by our learned Professor of the Theory and Practice of Medicine in his lecture on Bilious Remitting Yellow Fever where he says "If you bleed Scientifically give Calomel Scientifically and purge Philosophically you seldom fail to cure your patients." Its primary action is certainly on the lungs and bronchia from thence it is communicated to the brain and liver and if it should be suffered to run its course, the Mucus Membrane of the Stomach duodenum and intestines may be affected.

We conceive it to be the Broussain practice which has produced so many intestinal lesions. and that most of those subjects which they have examined are cases which have fallen victims

to

to their improper, and unscientific treatment.

We cannot consent to depend solely upon their mild remedial means of combating this disease, It resembles the tender fawn opposing the hungry lion, leaches and gum water is not sufficient to mitidate the high inflamatory action which rankles in the system and ready to burst its chains, The whole System soon becomes congested and leaches form but a slight barrier, the liver becomes engorged and gum water will not release it, Reaction comes on and a burning fever like vulture like preys upon the system, the whole animal economy is debilitated yet the biliary secretions are not released, Chillness is again developed with greater violence and perhaps in this cold stage the patients sinks into eternal rest, if not inflamation becomes more developed and gastro-enterite will often manifest itself. You must use your lancet and reduce the System, purge and unlock the liver, prescribe a strict antiphogistic regimen, and by this manner of procedure you leave but a few morbid specimens of intestinal lesion to grace our Medical Museums, or as memorials of the Brousaan doctrine.

We do not object entirely to the use of leaches but only consider them as ausiliaries in such cases where the system has

been

previously reduced by general depletion neither have we any great objection to the use of mucilagenous drinks but think them not efficient of themselves.

Miasmata first acts upon the nerves lining the respiratory canal it obtunds the nervous energies, the whole system becomes debilitated the force of heart and contractility of the arteries are disturbed, circulation is impeded, congestion takes place in the portal circle the hepatic duct becomes obstructed which is made manifest by the icterode appearance of the skin in many parts, the heart being unable to force the circulatory mass throughout the system the capilaries also become congested animal heat is not fully developed, breathing becomes difficult and hurried, and a chill ushers forth, soon the system seems to struggle for reaction and unless Nature can accomplish this her wise intent or in other words unless the system be competent to react the cold hand of death seizes the trembling victim, but if the vital energies overbalance which is generally the case fever reaction ensues and fever steels upon the stage, the skin which was before cold now and pale now assumes a more than natural warmth the pulse becomes accelerated the nervous and arterial systems morbidly excited, which is

is sometimes succeeded by coma apoplexy and delirium It appears to be a law of Nature that when any limb of the system is morbidly excited depression adequate to that excitement must take place and vice versa provided the patient be left to the healing art of Nature.

But here it becomes the duty of the physician to interfere and cut short a protracted disease, And for think that this may often be accomplished in the cold Stage by bleeding. It relieves the heart from the burden under which it labours lessens the regurgitating fluid produces a gentle reaction and a genial glow throughout the whole system the pulse becomes more frequent and less depressed and there will be no pain in the head or cephalic congestion

Intermittent.

We cannot admit the term Intermittent as applicable to the disease, or the kind of Miasmatic fever which bears this appellation; we consider them as remittents as there is never a complete absence of disease for if you examine the pulse and other symptoms with an eye of impartiality you will always find irregular pulse and accompanied with some visceral disease especially the liver and sometimes with torpor of the bowels and other dispeptic symptoms— If

If there was an entire intermission it would be as difficult to have a relapse of disease as if the affection had never been affected excepting the predisposition which exists in the liver and nervous system which may also be present after jaundice or any hepatic disease. We beg leave therefore to discard it entirely from our Nosology.

In Remittent or that class of Pyrexia which has been styled intermittent we have paroxisms coming on between which are sometimes a remission of several hours and even days. Those in which the paroxisms come on every day are termed Quotidians, every other day tertians and so on. We object to the appellation of tertian to a second day paroxism or one occuring every twenty four hours thinking it not in accordance with the meaning of the word, improper, embarising and perplexing to Students We would rather differ on this Nosological point thinking it not constant with true philosophy and, therefore insert between Quotidian and tertian the word Secundian (from secundus and die) Meaning every second day. Then in the stead of having the terms Quotidian tertian, Quartan Quintan et Cetera We use those of Quotidian Secundian, tertian, and Quartan &c.

In this last arrangement we count the intermission from the begining of one paroxism to the commencement of the next and not from the commencement of the one to the end of the succeeding making the first correct but then the disease must change as we cannot count so as to make the next paroxism come in proper time so as to keep up this type, we cannot make a tertian run its course in twenty four hours.

Miasmata

Concerning Marsh effluvia we have no chemical analysis It is an effluvia arising from vegitable decomposition accelerated by heat and moisture, which coming in contact with the lungs produces some one of the grades of paludal fever. acting as the remote or proximate cause Why is a person more susceptable to vernal remittents after having had an autumnal attack, It is because the liver and nervous system remains in a debilitated state he often complains of langour and lassitude, and he remains in this predisposed state until some exciting cause acts developing the disease. Our learned Professor of the theory and practice of Medicine says that newly generated never acts as its exciting as this return of disease before there is any vegitable growth manifest. Here we beg

beg leave to differ some little although in doing so we believe we are right still fear that we are wrong. a sudden change of temperature and other relaping and debilitating causes will no doubt act as exciting causes. We also think that its principal exciting or proximate cause is the Miasm arrising from Old Vegitable lying decaying during Winter in a half decomposed state and partially covered over with earth being washed up by rains and now exposed to a sufficient degree of heat for putrifaction it gives off its pestiferous effluvia, the degree of heat required for Vegitable decomposition is not very great Turner in his work on Chemistry gives 60°. as one of the most favourable temperatures for this process and no doubt it will go on at a much lower temperature. About this season the cartman carries out from the farmyards a heterogeneous mass of partially decomposed vegitable substances the plowman with his iron mould stirs up this matter and the whole atmosphere becomes in a degree Miasmatised especially in Marshy districts

Hectic Fever

Is supposed to arise from the absorption of pus into the system by many Writers. This is certainly not the case. We have

have hectic fever when there is no secretion of pus. no doubt it ever has been taken taken in the great circulatory mass. if so it certainly does not combine Chemically with the blood and it might easyly be detected there if it existed We believe it to act sympathetically on the system to be altogather a sympathetic disease transmitted through body by the ganglionic system of nerves. the blush on the cheak is produced by the local irritability of the part and perhaps also its gratir susceptibility at particular times sometimes one part becoming easy excited and sometimes another, The sympathetic blush of health is similar being only slighter in degree and not sufficient to produce morbid action. Can we say that this is the effect of some foreign matter sent to the part or merely healthy nervous excitement influenced by the stimulus of the will. by shame &c which causing an afflux of blood to the part produces that crimson hue

Treatment and Symptoms

This fever is characterized by a frequent weak pulse. flushings of the face, hands, or feet, profuse night sweats and diarrhoea. the pulse is generally from one hundred to

one

one hundred and forty and seldom falling even in the time of remission below one hundred. The exacerbations generally occur about five in the afternoon are mostly preceded by a chill, are marked by a sensation of burning heat in the palms of the hands which become red and mottled, and frequently in the soles of the feet a circumscribed redness appears in the cheeks terminating more abruptly than in health when the diarrhoea appears in the latter stage of the disease the sweats disappear during the sweating stage which is more severe of night there is a great deal of uric acid deposited, but during the hot stage it becomes pale and limpid. The exciting causes are always some local disease and generally a great if not an incurable one, so this fever seems to be a feeble and hopeless struggle of a constitution about to be overpowered.

The exciting cause must always be removed before a cure can be expected. A copious and long continued suppuration gives rise to this affection so may any cause acting for a long time on the nerves. It is here the Surgeons duty if possible to remove this offending matter (or substance) calm the irritability of the system. to check the debilitating sweats

sweats. but all this frequently will not do, death overpowers the greatest struggles of nature and nips the vital spark while thus sinking the blush which seemed to burn upon the cheek like an extinguishing taper gradually disappears leaving it wan palid and calous—

A few remarks on typhus and we have done. Typhus We consider a disease arising from filth, bad diet, confinement, such as crowded appartments, and other debilitating causes acting for a long time on the system, hence we oftener find in jails and among the poor than the wealthy or those living in airy situations, It is never contagious but we sometimes find it endemic, we think that marsh miasmata seldom if ever acts as the remote cause of this disease although it may be its proximate cause. It appears to be truly a pneuralgic disease, the nerves appear to be the first acted upon especially those of the stomach, with which the brain readily sympathises. There is a peculiar uneasy sensation at the pit of the stomach, want of appetite, nausia, slight giddiness disinclination to mental or corporeal action, the eyes become dull and heavy, there is often a tremor of the hands, a general debility torpor of the mental faculties, After a few day a slight chill comes on, alternating flushes of heat

heat disgust for every kind of food, the tongue becomes
covered with a thin whitish fur, considerable nausia, accom-
anied with increased mental and phisical depression becomes
more manifest. The cerebral mass appears to be the most
enveloped in disease and this together with the nervous
System generally we ought to apply our remedial aid, after
a short time, hearing becomes extinct, partial blindness suc-
ceeds very often, the voice faulters indeed the nerves supplying
those organs appear to be entirely obtunded or as it were ~~pa~~
paralised, the tongue becomes coated with a dark brown crust
there is a peculiar biting heat called calor mordax, fluc citatio,
subsaltus tendinum. in the early stage the bowels are generally
torpid but in the latter part diarrhœa often carries off our
patient.

Treatment

In this low form of Typhus we cannot use the
drastic cathartics, the bowels ought to be slightly moved
every two or three days by some mild enemita, by the
oleum Terebinthina or Acini, the nervous energies must be
sustained by tonics, ammonia, by blisters to the back of the
neck and extremities, applied only as long as they stimulate

then removed to some other part synapisms with free administration of generous wine, In this disease we ought never to despair, after every intellectual faculty hath fled when the heart hath almost ceased to act when he hath laid almost breathless, and speachless for days when death and life seemed to wrestle for the prise, the liberal use of wine alone hath roused him from this lethargy restored each dormant faculty and revived our patients.

We also find Typhus of an infamatory character where we find it absolutely necessary to bleed and purge, but we have heretofore only spoken of the lowest grades of this disease where stimulants are required, ~~in~~ the free use of synapism and stimulating diet, plogistic treatment throughout. But let the pulse be your guide in this as well as other diseases, let the tongue be one of the land marks. Who would attempt to give medicine without first examining the tongue, who would presume to bleed without first placing his hand on the pulse, None, none but the Quack

Sic credimus. Et si tibi vera videtur dede manus
Aut si falsa est. inexpurtum absolve

Vale viveq:

Inaugural Dissertation

on Cancer

Submitted to the Examination

of the

Provost, Trustees, & Medical Faculty

of the

University of Maryland

on the first day of April 1832

By

Fr B. J. Miller

Cancer is a disease with respect to the nature and cure of which, the enlightened and experienced practitioners of all ages, have confessed their extreme ignorance, whilst bold and ignorant empirics have at various periods, confidently avowed the efficacy of their respective specifics, in all the stages and forms of that terrible malady; and unfortunately, despair of receiving aid from regular Practitioners, continues to drive the persons who are afflicted with that affection into the hand of unprincipled pretenders. If we may credit the accounts published by various authors, it appears that there is scarcely any part of the body which is wholly exempt from the attacks of the cancerous affection; but it has been ascertained by reiterated observation, that glandular parts are much more liable to this disease than any others. The parts most subject to this disease, are the breasts of women, the womb, tongue, mouth, lips, nose, face, skin, testes, Penis prostrate gland, stomach, liver, &c. No part of the body is more subject to cancer than the breasts of women, the small glands of which are so liable to obstruction. It may occur at any period of life, but it seldom appears till about the time at which the menses usually disappear. Tumors arising in the breast previous to this period, have been considered by some authors as being only of a scrofulous nature, and it is probably owing to this circumstance that several cures have been of late years made on tumors of the breast by mercurial friction, and other remedies. This destructive disease excites the contiguous parts whatever their nature may be, to the same diseased action. The skin,

e cellular substance of muscles, and the Periosteum of bones all become affe-
ted, if they are in the vicinity of cancer, This very striking circumstance in
e history of carcinoma, distinguishes it from most other diseases. Cancers are
enerally divided by authors into occult and open, of which varieties we shall
peak more fully hereafter.

General History of Occult

n its early stage cancer has the appearance of a small hard tumour, for
e most part round, sometimes irregular, and has been compared, both from
size and figure to a hazlenut. Its increase is usually slow, unless exposed
irritation. "When slow; says Mr Abernethy, it is in general unremiting,
least I am inclined to think that the disease though it may be checked,
nnot be made to recede, by that medical treatment which lessens the
ulk of other sarcomatous tumours." The same gentlemen adds, "I state
is opinion however with some hesitation, for I have been informed by
rgeons, that diseases, the event of which proved them to be carcinomatous,
ve suffered a considerable reduction in size, by a peculiar local tre-
tment." This circumstance, he further adds, "affords in my opinion, another
riterion by which it, that is cancer, "may in general be distinguished."
s the cancerous tumour enlarges, it generally, though not constantly, beco-
es unequal upon its surface, so that this inequality has been considered
s characteristic of the disease, and it is a circumstance which deserves mu-
h attention. A lancinating pain in the part, frequently accompanies its

growth; but in some cases this pain is wanting. It attends also on other tumours, the structure of which are unlike carcinoma; this pain cannot therefore be considered as an infallible criterion of the nature of a tumour. This pain when present is of a peculiar kind; it consists either of sharp lancinating throbs, of deep shootings, or, in absence of these, of a constant knawing, or sense of burning heat diffused over it; or of a prickling like the thrust of needles. At first it prevails chiefly on the changes of weather, but, in process of time, it becomes almost constant, independently of any external cause, and is then spread round the seat of the disease.

As the disease increases it acquires an additional incompressible hardness, and protuberance in the middle, while the surrounding subcutaneous vessels assume a varicose state, or feel thick and knotty. The diseased skin covering a carcinomatous tumour sometimes ulcerates, before the tumour has attained any great magnitude; the skin begins gradually to change colour, it becomes first red, then purple, or lead coloured, and so the shade advances, being marbled as it were, with varicose livid veins, until it ends in black, but before this last colour appears, the integuments generally give way and the contents of the tumour fall out; particularly when cells, (filled with pulpy matter, of different degrees of consistency, and of various coulours) within the tumour are by this means laid open; from the sides of which an excoriating ichor copiously distils. On the bursting of the integuments, the disorder becomes what is called an open or ulcerated cancer, and

presents a new series of phenomena.

Open or Ulcerated

The following definition is given by Mr. Pearson, who says, "A cancerous ulcer is attended with a constant sense of ardent pain; it is irregular in its figure, and commonly presents an unequal surface; it discharges a sordid, sanious and fœtid matter; the edges of the sore are thick, indurated, and often exquisitely painful; they are sometimes inverted, at other times retorted, and often exhibit a serrated appearance. The ulcer, in its progress, is frequently attended with hæmorrhages, in consequence of the erosion of blood vessels." From the body of the sore, or its edge, a kind of spungy sprouting flesh, or growth, takes place, which soon assumes symtoms of grangrene or decay, and falls off, while the same appearance is successively renewed. The progress of the disease is various; in some cases it advances rapidly, and there prevails, along with it, considerable inflammation; but more frequently it advances gradually, by an almost imperceptible corrosion of the adjacent parts. The direction of this corrosion is generally in the course of the lymphatics, and the glands in the vicinity of the diseased parts successively assume the diseased action. During the use of remedies, the thin ichor often assumes the appearance of pus, at least of a white sordes resembling pus, which adheres closely to different parts of the surface of the sore, this change however divests it of no portion of its acrimony, nor imparts to it any of the properties of real pus. In the progress of

the ulceration, the sore acquires a peculiar, and intolerable stench whereby it may be readily distinguished, by practitioners conversant with the disease. It is more offensive than the odour, from any other species of ulcer; and is equally loathsome to the patient, and to the by standers. This fetor is increased by the use of greasy applications. When the diseased actions have, as it were, exhausted themselves by their vehemence, an attempt at reparation appears to take place, similar to that which occurs in healthy parts. New flesh is formed, constituting a fungus of peculiar hardness, as it partakes of the diseased actions by which it was produced. This fungus occasionally even cicatrizes. But though the violence of the disorder is thus mitigated, though it may be for some time indolent and stationary, it is never spontaneously cured, nor does the part ever become healthy. In general, however, the disease continues to extend and the glands at a considerable distance from the original tumour become affected. The progress of carcinoma in an absorbent gland is the same as that which has been already described. The disease is communicated from one gland to another; occasionally a gland or two become diseased out of the ordinary route of the absorbed fluid. In the advanced stage of the disease a number of small tumours, of a structure similar to that which has been noticed to exist in the incipient state of cancer, are formed at a distance from the chief tumour, so as to form a circle round it. As the loss of substance proceeds, the functions of the body become disturbed, the appetite fails, and the strength gradually decreases. Hectic fever is formed, with strong evening exacerbations, but before

it can prove fatal, the patient is generally cut off by hæmorrhage, the corrosion of the larger blood vessels being one distinguishing characteristic of the virus of cancer; or by a fit of convulsion, and thus a miserable and painful existence is terminated. Such is the general appearance of this disease, one of the most painful and loathsome that can attack the human system. The patient's existence is often protracted under the most excruciating torture, until the body has fallen into a state of extreme emaciation, receiving little alleviation from any treatment hitherto adopted. Although we are fully warranted, by the testimony of the most respectable writers on this subject, in considering the above as the usual phenomena presented by this disease, it must be admitted that there are frequent variations in particular cases, and these variations are the sources of much perplexity to practitioners, when called on to decide as to the nature of tumours and ulcers. There is another circumstance in the history of Cancer which deserves attention and investigation; that is, whether a disease not originally cancerous can become so, in its progress. We can only form our opinions on this subject from analogy and observation. Analogy leads us to believe, that such an alteration in the diseased actions may readily take place. Venereal buboes often change their nature, after the administration of mercury, and become troublesome sores, to which that medicine is rather detrimental than beneficial. Injuries induce inflammation and enlargement of parts, which afterwards degenerate into scrofulous diseases. But though analogy seems so strongly to favour the opinion, I cannot, says Mr. Abernethy, take upon myself to

say, that my observations have confirmed it. When tumours have been removed, the history of which corresponded to that of cancer, a cancerous structure was observed in them; and, on the contrary, in diseases of an apparently different nature, a different organization has been found. I once, indeed, assisted at an operation where the tumour was of that kind which I have denominated pancreatic; and I heard afterwards, that the patient died in the country of a disease which was reputed cancerous. When a hard tumour, which has existed a long time in a gland, without either diminishing or increasing, and without giving any pain, begins at length to grow uneasy, to extend gradually in its dimensions, and to be affected with occasional pungent and lancinating pains, there is reason to suspect, that it is taking on the cancerous action; this is not however, invariably the case; since many instances have occurred, where the tumour has fallen into a state of inflammation, and even been attended with that peculiar kind of pain which most of all is to be suspected, and yet the disease has not proved to be of that fatal nature, but the patient has received a certain, though tedious cure. These instances, when they do occur, are eagerly laid hold of by quacks, and the venders of nostrums; and are advertised as instances of the efficacy of their plans, which unwary persons, really affected with cancer, are sometimes drawn in to make trial of at the expence, perhaps, of the only resource which remains for their security. This disease, as before observed, does not put on the same appearance in every instance, but, in common with some other local affections, is so far influenced by the peculiarity of structure, of the part affected, as to exhibit very different appearances. These, indeed, have borne so little resemblan-

in some instances, as to have tempted authors to deny that the general term cancer could be strictly applied to them. Mr. Adams thinks the cancer of the uterus at least, a very fair exception; and not only that of the rectum, but every carcinomatous affection which begins on the skin, or parts superficially situated, seems clearly distinct from the same diseases in the breasts or other secreting glands. The incipient state of cancer has been distinguished by the name of scirrhus by authors. The scirrhus state of a gland is that in which the tumour gives no uneasiness, and in which the skin does not lose its natural colour. Every indurated and insensible tumour in a gland is therefore, strictly speaking, a scirrhus: the term, however, is never applied to such affections, unless they threaten to terminate in cancer.

Anatomical Structure

It is difficult to convey correct ideas of the structure of carcinoma by words, or even by drawings. In the generality of instances the diseased part is peculiarly hard, and there are intermixed with it firm whitish bands, such as Dr. Baillie has described, and represented in his book and plates of morbid anatomy. there is indeed no other striking circumstance, which can be mentioned as constantly claiming attention in the structure of this disease; except perhaps the smooth and solid appearance which has been said to resemble that of a raw Irish potatoe when cut. These firm whitish bands sometimes extend in all directions from the middle towards the circumference of a carcinomatous tumour having little intervening matter

Sometimes they intersect it irregularly; having interposed between them a firm brownish substance, which may be scraped out with the finger. Sometimes they form cells, containing a pulpy matter of various colours and consistency; and sometimes these bands assume an arborescent arrangement, ramifying through the diseased substance. Firm white bands, like thickened and compact cellular substance, are seen as the disease advances, to extend themselves from the original tumour amidst the fat in which it is occasionally imbedded, intercepting portions of fat in the irregular areola which they form. This appearance led Dr. Adams to conjecture, that all the fat might be originally diseased, and that these white bands might be a thickening of the cellular substance, which ensued as a natural consequence. This circumstance deserves consideration on account of its practical application; for if after removing a carcinomatous tumour, the surgeon attends to the part which has been taken away, he will see if any of these bands have been cut through, and, consequently, whether some of this diseased substance, which ought to have been removed has not been left. This circumstance cannot be observed by looking at the bleeding surface of the wound, but may be readily ascertained by examining the part which has been removed. These are the chief circumstances, which characterize cancer and distinguish it from other diseases. The account of them is brief, because it was not designed particularly to discuss the subject, but merely to point out its distinguishing characters.

Causes.

The want of familiar acquaintance with the diagnostic signs of cancer,

has been a most fertile source of error and deception; and "while we remain unfurnished with authentic standards," or established data, by which all observations may be examined, it ought not excite surprise, if the same name be applied to two complaints, the history of which are different from each other, or, if opposite modes of treatment be directed for diseases of the same nature. A great deal of commendable pains has been lately taken, by the promoters of two public institutions in London, to investigate the nature, and to improve the treatment of carcinomatous disorders; but from the first results of their labours, we scarcely can say, that any approach has been made towards the attainment of so desirable an object. One of the gentlemen engaged in this business, has shown with much clearness and accuracy, that our best definitions of scirrhus and cancer, have been very inaccurate and erroneous; whereas Mr. Home, a surgeon, of considerable reputation and experience, affirms that, there can be no difference of opinion respecting the nature of the complaint; for "says he "the truly scirrhus tumour, which is known to be capable of forming the cancerous poison, when allowed to increase in size, has been so often described, that every surgeon must be enabled from those accounts to pronounce the tumour, when he meets with it, to be of that kind." This author likewise thinks he has proved decidedly, that cancer is not a disease, which immediately takes place in a healthy part of the body; but one for the production of which, it is necessary the part should have undergone some previous change, connected with disease; whereas Mr. Pearson has adopted the contrary opinion, namely, that cancer is always an original disease, and never appears as the sequel

any morbid affection whatever: After all that has been written, and said on this subject, it must be admitted however, that we are still in the dark concerning the cause of scirrhus and cancer, or the nature of that peculiarity of constitution in different persons, which predisposes them to this malignant derangement of animal structure. We do not even know what changes constitute the cancerous state of an organ; and it is yet debated in the medical world whether the disease be local or general. Cancer, occurs most commonly in elderly persons, but no age is exempt from it. M.r Burns mentions his having seen it, distinctly marked, and terminating fatally, in children of five years old; he mentions two instances of the eye being affected in such subjects.

Predisposing Causes.

The period of life at which it most commonly occurs, and the circumstances of its progress, seem to indicate that the causes, whatever they are, must be of a sedative or debilitating nature, and that they are such as are capable of giving rise to, and actually do give rise to a general cachectic state. It is this state, perhaps, on which the obstinacy of the disease depends; and its appearance in the form of cancer is particularly favoured by the minuteness and peculiarity of glandular organization, whose circulation, at all times, depends much on the irritability of its own vessels. Any diminution of the general tone of the animal fibre, must on that account, display itself by a stronger tendency to obstruction in such parts. As cancers occur much more frequently now, than in former times, we must admit

the existence of causes, which, cannot be otherwise than general in their nature. This increased frequency cannot, it is evident, be attributed to external circumstances or accidents, as they must have been about the same formerly as at present. We must therefore look for these causes in the body itself. Perhaps some light might be thrown on the subject by comparing the modes of life in former times, with those which are adopted at the present period. But, to enter into a full investigation of this subject, would be to engage in a discussion, which could not be embraced with in the limits, to which I intend to confine myself. I will therefore merely remark that the differences between the modes of life of former times, and those of the present, are chiefly refferable to the two following general heads: 1st. Increase of luxury in the higher ranks of society; and 2d. The immoderate use of spirits, and other articles producing indirect debility, joined to a want of the due quantity of nourishment, in proportion to the labour undergone, in the lower orders of society. Some difficulty may, perhaps, attend the precise application of these general causes, to any particular modification of disease; but still the circumstances seem probable, and the more the subject is studied, the greater influence will the causes seem to possess, in accounting for this and many other forms of diseases now so prevalent.

Exciting or occasional causes.

All the other causes of predisposition that have been enumerated by authors, are included in these two general heads. We shall omit therefore particu-

larizing them, and proceed to examine next, those which produce the immediate attack of the disease, or the occasional causes; which may be referred, either to: 1st. Accidental impressions producing injury of the part 2d. Changes altering the course of the regular circulation, and determining to the seat of the disease 3d. To both these causes combined. Of the former are all external accidents, as blows, contusions, preceding inflammation, &c. Hence in almost every cancer, particularly of the breast, we find it attributed to some accidental injury. Even the practice of wearing stays, in the manner commonly practised by females, must greatly expose to obstructions by resisting the passage of the fluids through the minute vessels. Of the others are all suppressed discharges, affections of the mind, &c. Those women who are attacked with this disease in early life, we find for the most part, irregular; hence we may with propriety consider the cessation of the regular menstrual discharge, as a cause of cancer in the females of advanced life; as well as the suppression of the haemorrhoids in the male, when being accustomed to them, indeed, out of twenty women affected with cancer, fifteen of them will be at this critical age. The pressure of grief long continued, by producing a powerfully sedative affect, has been said by many to have caused this disorder. So sudden and violent emotions have been also sometimes suspected of producing the same affect.

Cure.

It cannot be doubted that numerous cases on record, denominated cancer, and perhaps all those in which cures of this disease are said to have been

performed, without destroying or removing the part affected, were complaints of a very different nature. Many hard tumours of the breast, especially those of a scrofulous kind, and such as appear after child bearing, have been mistaken for cancers, but they may generally be dispersed by the early and repeated application of leeches, bathing with camphorated spirits, soap liniments, hemlock poultices, saturnine lotions or gentle friction with mercurial ointment. It has been justly observed by Mr. Home; that the success met with in some of these cases, is often productive of material mischief, by inducing practitioners to be too sanguine, and to go on with the use of the same means in other cases, encouraged by this former success, till the disease has arrived at the state of a true cancer, and has advanced beyond that stage in which it might have been thoroughly removed by an operation. The boasting cancer curers, have not sufficient knowledge to discriminate between the different kinds of tumours they meet with, and they have too little honesty to confess that the cases in which they have had success, were really not cancerous; for such an acknowledgement would annihilate their traffic, and destroy their ill gotten reputation. For I am thoroughly convinced, that this unprincipled class of practitioners, subsists chiefly by imposing on the credulous and inexperienced part of mankind, especially the female sex, who are terrified by curable disorders falsely named cancers. It is of great importance, on the one hand, not to alarm our patients prematurely, by giving a hasty and unfavourable opinion;

but, on the other hand, practitioners would do well to weigh all the circumstances which may enable them to decide on the nature of such tumours and if they are confident of their being carcinomatous, to lose no time in advising the only step which can be taken for the security of the unfortunate sufferers. The chief difficulty on this subject, is to discriminate between scrofulous indurations, and scirrhous tumours; and let it is a point of great importance to be correctly settled, as on this depends the comfort and safety of patients. If a cancerous affection is decided by the surgeon to be a scrofulous tumour, the patient may indulge a fatal and delusive hope of perfect safety until the disease has made so great progress as to be without the reach of surgery. If on the other hand a scrofulous tumour is judged to be cancerous, the patient is unnecessarily subjected to a formidable operation, and more over, according to the opinions of some respectable pathologists, rendered particularly liable to phthesis pulmonalis. To discriminate between these two affections, will not however be found always to be so easy as represented to be by Mr. Home, whose remarks on this subject I have already quoted. It should not however be forgotten that Mr. Home has in an other part of his book acknowledged himself to have been frequently mistaken. "So much, says he, "does the same disease differ in its appearances, in different patients, from the endless peculiarities of their constitutions, by which every part of their body must be more or less influenced that it is not possible in practice to distinguish in all cases between carcinomatous and scrofulous tumours, after they have advanced to a certain size; and I am

readily to confess that, in many instances, I have mistaken the one for the other and have removed, by operation tumours which at the time had the appearance of being cancerous; and upon examination, after their removal, found them of a scrofulous nature. On the other hand, I have neglected to remove tumours, from the circumstances making it probable that they were scrofulous; which afterwards became cancerous, and destroyed the patient. In all such doubtful cases, it is the safest rule to advise the removal of the tumour, if it be situated fairly, for the operation; as it is a much less serious inconvenience to lose a scrofulous gland, than to retain a cancerous tumour which probably might cost the patient his life. There is reason to suspect that many surgeons, who boast of their extraordinary success in exterpating cancers, have sometimes dissected out tumours which might have very innocently remained; for the surprising disparity, which we find, in the results of the practice of different surgeons, is not reconcilable on any other supposition. Thus Mr. Nooth asserts, that in one hundred and two scirrhous cases" on which he operated in the early state of the disease, "all remained free from any return of the complaint;" whereas Dr. Munro says "of sixty cancers which he had seen exterpated, only four remained free of the disease for two years; and these became cancerous afterwards. This account of the late Dr. Alexander Munro, is so very discouraging, that it will not be improper to suppose the failures in those cases, arose from some peculiarly unfavourable circumstances. But later practitioners have been a great deal more successful; and a late publication by Mr. Hill, has put the

usefulness of extirpation beyond a doubt, when the operation is performed sufficiently early; though, after the disease has continued long, the whole system becomes more predisposed to cancer, and the disease almost certainly recurs in some other part. On the fullest and most deliberate consideration that I have been able to give this subject, I am decidedly of opinion that in cases where persons are afflicted with external cancers, they should not despair of being cured, when the affected parts can be thoroughly removed, and the operation can be performed at an early period of the disease.

Palliative Treatment.

As the disease, when arrived at the open, or ulcerous state, cannot be successfully combated through the medium of the constitution, and as none of the remidies proposed have, on trial, been found to merit our confidence, it would be a waste of time even to enumerate them; we shall, therefore, briefly mention those remidies from which we may hope to procure for the patient some temporary advantages. The topical applications to an open cancer, which have been found most useful to alleviate pain, cleanse the sore or correct the fetid smell arising from it are as follow:—

1st. Fresh bruised hemlock leaves.
2. Scraped young carrots
3. Arsenic and flour
4. The fermented poultice
5. Finely levigated chalk
6th. Powdered charcoal
7. Carbonic acid gas
8. A watery solution of opium
9. Liquid tar, or tar water
10. Decoction of oak bark

The internal remedies which have been most beneficial are:—

1st. Very small and long continued doses of arsenic
2. Liberal doses of cicuta
3. Free use of opium
4. Aconitum
5 Hyosciamus
6th Belladona
7. Solanum
8. Martial flowers
9. Corrosive sublimate
10th Nux vomica &c—

The chief object the surgeon has in administering these remedies, is the alleviation of pain. It is to this property alone, in different narcotic vegetables, that many authors attribute their supposed virtue in cancerous affections. Pain not only abstractly, but relatively, impairs the body. Its stimulus is not merely attended with direct morbid consequences, but tends also indirectly to the patients injury. by destroying the appetite, and producing the most afflicting state of mental dejection. The remidies capable of alleviating the violence of pain, are both general and local. Of the former kind, not only opium, but most of the inferior narcotics, have been administered with considerable temporary benefit. It is generally expedient, indeed, to carry the use of these remedies, as far as the immediate safety of the patient will admit; not forgetting, that in the alleviation of pain is, perhaps, involved the prolongation of life; for debility, the gradual increase of which marks the progress of cancer to its fatal termination, is greatly increased by long continued and violent pain.

Extirpation.

But neither the external nor internal remedies however apparently use—

ful for a time, can be depended on, for the cure of a genuine confirmed cancer. Scirrhous tumours and cancerous excrefsences may be removed from almost all the external parts of the body, but no surgeon perhaps could now be found to undertake the excifsion of any internal organ; for example the uterus Attempts have been often made by ignorant and bold impirics to destroy a cancerous ulcer of the womb, by corosive injections; but the practice is as cruel as it is inefficient: I have seen the utmost distrefs result from this absurd procedure. Several instances are recorded of the uterus having been excinded, and some of the subjects of these operations have survived, but no case that I know of, is related of such an operation having been performed for the purpose of esterpating cancer, although I am aware that it has been lately proposed by a speculative writer of Germany. The circumstances which indicate the propriety of an operation are these:— 1st When a cancer is so situated as not to expose any large blood vefsels or nerves to be cut in the operation. 2d When the whole of the morbid parts can certainly be removed. 3d When the disease has been excited into action by external accidental causes. 4th When the patient is otherwise healthy. 5 When the cancer has not shewn evident symtoms of considerable malignancy during its progrefs, and does not seem to have involved the adjacent glands, or absorbent vefsels. The two first of these requisites are not to be dispensed with; for, unlefs we can difsect out all the morbid parts, without incurring the danger of dividing important nerves; or arteries which could not be controuled by ligatures, the operation must

never be attempted. The mode of operating must vary in different cases and situations. Some excellent directions are given on this subject by Messrs. Fearon, Home, Pearson, Nesbit, Bernstein, Ritcher, Le Dran Sabatier and Callisen; which young surgeons should consult. The only general rules we can here lay down are:—

1st To make the external wound nearly in the direction of the subjacent muscular fibres, and to make it large enough for the removal of all the morbid parts. 2d To save if posible as much healthy skin as will neatly cover the whole of the exposed surface. 3d To secure with great care every bleeding vesel which might hazard a subsequent hæmorrhage. 4th To retain the lips of the wound in close contact, without interposing any dressing or extraneous substance between them. 5th To preserve the parts in an easy and steady position for some days, before they are looked at or opened. 6th To use no other than mild and cooling applications during the cure.—

Here I to conclude this dissertation without expressing my thanks to the professors who fill their respective chairs, with so much honour to themselves and advantage to their pupils, I should consider myself guilty of ingratitude.

In taking leave of my medical teachers in the college, I beg leave to assure them of my high respect for their talents and enterprize, and of my ardent wishes that this medical school may soon attain the rank to which the merits of its professors and the lib

erable principles on which it is established entitle it.

A dissertation on Yellow Fever

Submitted to the consideration
of
The Medical Faculty Provost & Trustees
of the University of Maryland

By

Saml. B. Creighton

of Maryland.

absent

To Prof Nathl. Potter –

I am induced to inscribe this essay to you not only as expressive of my admiration for your acknowledged superiority as a public teacher, but also as a testimony of gratitude for your many kindnesses to me while a student of your office.

I could have wished – and indeed it had been the high and cherished hope of my ambition to have offered something more worthy at the shrine of your genius – But although the tribute be humble I feel it a proud privilege thus publicly to express my long cherished admiration and gratitude –

The Author.

For the last forty or fifty years no subject in the wide domain of medicine has so wholly engrossed the attention of the physician as Yellow Fever

Its origin and nature have offered an extention field for discussion and brilliant speculation—

Indeed from the very nature of the disease we could not but infer that it would claim the attention of the most gifted of the profession, for it has appeared in tropical regions and in many portions of our own country under a garb so terrific as to appal the stoutest heart and as it were dash aside the skill and best directed efforts of the practitioner in medicine—

In selecting this subject for our inaugural thesis we are very sure that we can advance but little if any original matter, the subject has been fully and ably discussed by many of the most talented of the profession—

It may be asked why then write on a disease

so common and already so copiously treated, why not take some subject less fully discussed?— We answer that almost every subject of much interest in medicine is either exhausted or enveloped in such obscurity that after exhausting our powers in idle speculations we have to return to our starting place, like the child that chases the rainbow in hopes of finding at its base the fabulous treasures, but who at length returns weary and exhausted without any substantial trophies—

Our object in selecting for consideration Yellow Fever is to become as perfectly acquainted not only with disease but with the whole class termed "bilious" as reading can make us, being convinced that they are all produced by the same causes and differ only in degree—

That the Yellow Fever is not a disease of modern origin there can be but little doubt— Hippocrates has portrayed the disease in as correct and vivid a manner as Hillary or Rush—

"This illustrious guest – to use the terse and nervous Language of Professor Potter – viewed the disease he so well describes in the mild climates of his native soil, almost in the same parallel of latitude in which we live – He speaks a language without disguise and susceptible of but one interpretation. He enumerates the more prominent symptoms under the following appellations – καυσος, the ardent fever; τυφος, a stupor or coma; φρενιτις. an inflammation of the brain or membranes; ικτερος; a yellowness of the skin and caps the climax of the malignant picture by the words μελαν εμεσον – black vomit –

"In burning fevers," says Hippocrates, "a yellowness of the skin on the fifth day, especially accompanied by a singultus, is a sign of great malignity." Potter on contagion –

Indeed we could not but infer "a priori" that the shores of the Mediterranean and Archipelago would be a "nidus" of marsh miasmata and that the same poison which under ordinary circumstances produces the common intermittents and remittents of that climate, would by being rendered more concen-

= trated, either by a greater quantity of vegitable decomposition or by a hotter sun produces the worst forms of Yellow Fever—

Thucidydes in his discription of the epidemic that prevailed at Athens during the Peloponnesian war has described a disease so similar to yellow fever that we cannot but believe that they were produced by the same cause— the principle characteristic of the Plague which would seem to distinguish it from Yellow Fever, was that it appeared of a lower grade of action— this however was owing no doubt to the poison acting on persons whose systems were debilitated by the anxieties and hardships of a protracted war—

Doctor Gregory has given the following as the symptoms of the plague— "A feeling of great languor and lassitude ushers in the attack of plague, which for the most part happens towards evening. There is always a cold stage, though it is seldom of long duration. Heat of skin headache and giddiness succeed. The pain of the head is referred to the eyebrows. They appear heavy, dull

and muddy. The expression of the countenance changes in a remarkable degree. Sometimes there is a wild and furious look; sometimes a look claiming commiseration, with a sunk eye and contracted features. The most striking of all the early symptoms of plague is the staggering, and the sudden extreme prostration of strength. The tongue is white and moist. the bowels are sometimes torpid, and at other times loose, the evacuations being always highly offensive. The speech flutters. The pulse is at first small, hard and quick; but after the appearance of buboes it often becomes full and soft. It is sometimes intermittent. In point of frequency, its average may be stated at 100. The heat of skin is seldom very intense. The head is occasionly perfectly clear and collected. At other times stupor appears immediately after the formation of the hot fit. Some cases of the disease are ushered in by a violent fit of mania. The greatest indifference with regard to recovery prevails and it always reckoned a most unfavourable symptom.

In this discription we have a graphic delineation of Yellow Fever – it so near resembles the discription by Dr Rush of yellow Fever as it appeared in Philadelphia in the memorable year of 93 that we cannot but be convinced of the identity of the two diseases –

It is quite a common opinion in the Levant that the plague subsides with the appearance of Frost, this certainly would seem to prove that it does not obay the common law of contageous diseases – For they are more violent and more extensively diffused during the winter –

Indeed it is very doubtful whether there are any specific contageous diseases, with the exception of the exanthemata. Typhus so long considered a disease solely arising from specific contagion is now generally thought to be produced by common miasmata acting on a system weakened by confinement, bad food and the depressing passions – This was exemplified last summer in the Baltimore jail, where a disease certainly answering the discription of Typhus was produced by vegitable decomposition –

In modern times the term Yellow Fever has been applied to express a particular form of febrile disease which has been observed to prevail in the West Indies along the shores of North America - particularly in New York - Philadelphia and Baltimore and more recently it has ravaged in the southern parts of Spain - For several years past however it has been a stranger to our more northern cities and has appeared as an epidemic alone in Orleans and other places in the same parallel of latitude where it has assumed a form truly terrific -

Probably no disease has received so many names as the one under consideration - named too which throw no light on the pathology of the disease and appear to have been given to it from some casual symptom, by no means pathognomonick of the disorder - By the West Indians it has been termed the "Malade de Siam" from an erroneous impression that it was received from that place - Others have called it especially

the Spanish writers "vomitus prieto" from an accidental concommitant of the worst forms of the disorder—

Concerning the contageon of Yellow Fever it is unnecessary to say much, those who have any doubts on the subject— we would recommend to their consideration the elaborate and valuable work of Professor Potter on that subject— that gentleman has met the abettors of that doctrine with a mass of evidence both theoretical and practicle, which we think conclusive and must put the subject forever at rest.

Yellow Fever is produced by the miasm arising from vegetables in a state of putrefaction or decomposition— The nature of the poison has not yet been ascertained— The subject does not appear to have received a due attention from the chemist, but it is more than probable that the rapid advancement of that noble and very intersting science will ere long possess us

sufficiently delicate to explain its nature—

Whatever may be the constituent principles of this poison there can be no doubt but that it first impinges on the nervous system— whether of the cerebro-spinal or ganglionic system is not certainly ascertained— In some instances there is every reason to believe that the brain has received a severe injury— whilst in other cases when a powerful impression has been made on the system, that organ appears but little if at all affected—

Some writers have regarded this miasm as a stimulant and that it produces debility indirectly— whilst others consider its primary action sedative

At the head of the advocates for the former doctrine stands the late D. Rush— He states in his work on the Yellow Fever as it appeared in Philadelphia in 93— "That whatever be the specific quality of the matter which produces the fever, it is certain that it acts as a stimulant upon the whole system.

In a moderate degree it produced only a quickness and fulness of the pulse, but when it was more active it induced that species of debility which has been happily called indirect"—

With due deference however to the illustrious author just quoted we must say that the mass of evidence is in favour of the other theory, most writers of the present day regard the poison as directly sedative— Indeed the phenomena of the forming stage of the disease cannot but convince us that it is sedative— The patient who has been under the influence of marsh miasmata— feels languid and listless and weary, indeed the first those indescribable sensations which the French have expressed by the term "ennui"—

The stomach, liver and brain are the organs on which the disease exerts its principle force— and if any one of these can be said to receive the greatest injury— that distinction is surely due to the

stomach- We are by no means an advocate for the "fashionable" doctrine of gastroenteritis yet in this disease that organ almost invariably shows the strongest marks of disease and the ravages of inflammation. The mucous membrane is frequently injected or ulcerated and in many parts gangrenous or wholy disorganised- The ileo cæcal portion of the small intestines are also found bearing evidence of the ravages of the disease- Since we have touched on this polemick subject- since we have placed our foot on forbidden ground we deem it necessary to make a remark concerning the "gastric" pathology and its author-

From the evidence deducible both from the symptoms and post mortem appearances of those labouring under Fevers, we think that the universality of the doctrine is destitute of foundation, and very frequently when this organ is found bearing the marks of inflammation

that it is a result of the disease, and not its cause. But after taking all these things into consideration we cannot but believe that the writings of Bryan have had the most beneficial influence on the practice of medicine, and that his brilliant talents, should claim our admiration, and his industry our warmest gratitude.

In the New York Medical Repository Dr. Physic states that he rarely found the liver much diseased, but that the stomach was always inflamed and in part gangrenous. Other writers however have found the liver much diseased Dr. Chisholm states he has frequently found the liver in a dissolved or putrid state or Sphacelated, and of the consistence, feel, and colour of rotten cork, or full of abscesses.

"The best description of Yellow Fever are to be found in the works of Hillary and Rush. Hillary

describes the disease as it appeared in the West Indies and Dr. Rush as it appeared in Philadelphia

The former says "it seized the patients with a chill, succeeded by violent heat and fever" This known is not the case always, for some die in the cold stage - the poison seeming to act in such a concentrated and violent manner that the excitability of the whole system is destroyed so that reaction cannot take place -

"Darting pains in the head succeed, and violent pain in the back and extremities now take place - this are the symptoms during reaction" - The above mentioned symptoms are followed by a "flushing of the face, redness of the eyes - the eyes sometimes watery and glassy - The skin brown mahogany colour, a burning of the eyes is complained of - this is a very common symptom - great anxiety and oppression about the precordia - this symptom should claim our particular attention -

— great restlessness and tossing in bed, sighing when the stomach and liver are affected — these symptoms are caused by a preternatural accumulation of blood in the viscera — Sometimes only the contents of the stomach or gastric juice is thrown up — The bile vomited in this disease is described by D. Hillary and D. Rush as being yellow — it is not the common yellow bile however — but similar to eggs — Pulse frequent and quick, sometimes as much as 120 beats in a minute — D. Hillary says it is "sometimes soft" — In this he is most probably mistaken the pulse which he considered soft is that which has since received the appellation "depressed" and is indicative of great congestion —

"Thirst was frequently" says D. Rush in his description of the yellow fever as it appeared in Philadelphia in 93 — "on the 4th or 5th day a discharge of matter from the stomach

resembling coffee impregnated with its grounds
This was always an alarming symptom - I believed it at first to be a modification of vitiated bile, but I was led afterwards by its resemblance to the vomit to suspect that it was produced by a morbid secretion in the liver, and effused from it into the stomach - Many recovered who discharged this coffee coloured matter -
This matter is the "black vomit" Dr Rush most probably is wrong in considering it as coming from the liver, it does not appear to possess any of the properties of bile - and is most probably a mixture of blood and gastric juices -
The tongue is in most cases moist, and of a white colour on the first and second days of the fever - As the disease advanced, it assumed a red colour, and a smooth shining appearance ~~in its middle~~ It was not quite dry in this state - Towards the close of the fever, a dry black

streak appeared in its middle, which gradually extended to every part of it. Few recoveries after this appearance on the tongue took place.

Many more symptoms might be mentioned but we deem it unnecessary - as they may be found in any work on the disease.

If the causes and ~~treatment~~ pathology of yellow fever have been subjects for dispute the treatment has likewise offered a wide scope for contention. Whilst some strenuously recommend a prompt and energetic treatment; Others recommend the simplest and most soothing remedies.

From a careful estimate of the best authorities on the subject the chances are in favour of a bold and energetic mode of treatment.

When the pulse is frequent quick and tense, attended with hot skin and dry - pain in the head, great intolerance of light and sound - great irritability of the stomach - In such a case as this no means

of common sense would hesitate to use the lancet and use it freely - a large orifice should be made in the vein and the blood suffered to flow until a decided impression is made on the system, until the heart is disabled - At the same time he should give some purgative medicine calomel is the best - cold applications should be applied to the head - the room should be kept cool, quiet, and moderately dark -

Sometimes however the cause to be pursued is not so clear, the symptoms of inflammatory action are not so manifest - There is a dull pain in the head - great depression about the precordia, great sickness - irritability of the stomach, tossing in bed - the pulse is depressed, appearing at the first touch to be soft, but if pressed on it offers considerable resistance to pressure

These symptoms indicate congestion — in such a case it is generally necessary to bleed — but our object is not the same — in the former case we were anxious to make a decided impression on the activity of the heart — here we wish to remove the blood so as to relieve the internal organs already surcharged with blood — in such a case as this we bleed from a small orifice — and let mercury for its constitutional effect — it tends to remove congestion — to equalize the circulation — and to promote secretion —

during the whole course of the disease cool acidulated drinks should be given —

An Inaugural Dissertation

On Delirium Tremens

Submitted to the examination

of the

Provost Trustees & Medical Faculty

of the

University of Maryland

on the 10th March 1832.

By Josp. Howard

Maryland

Delirium Tremens.

I beg leave to offer to your consideration that very interesting form of mental disease, denominated Delirium Tremens Not with the expectation of offering any new or original ideas on the subject, for it would ill become me unaided either by experience or extensive research to aim at any thing novel or original on a subject, which has so long occupied the attention and talent of the Medical world on both sides of the Atlantic. I shall therefore, actuated by these considerations, confine myself, as far as I am able, to a succint and accurate description of the disease, as given us by the most respectable writers. It is, I believe a disease peculiar to the habituated drunkard and to those addicted to the inordinate use of opium and other stimulating narcotics. And is most generally ushered in, by the following symptons. To wit, indistinct chills, general lassitude, vertigo uneasiness in the head, with oppression in the epigastric region, anxious countenance connected with short and disturbed slumbers. To these soon succeed

others which wear a more formidable and imposing aspect; such as a wild confused, bewildered countenance, nausea and sometimes vomiting, with a weak rapid pulse. Tremors of the hands, a constant watchfulness connected with a dampness of the skin, and a general irritability of the whole system increased by the slightest exertion. The confusion and disturbance of the mind, is sometimes very considerable, so much, so that the unhappy sufferer will imagine that his affairs are ruined, that certain persons have conspired with the intention either of depriving him of life or destroying his property. Again, he will conceive that his best friends have abandoned and forsaken him, or that he is confined in some strange place against his inclination and desires, and not unfrequently he will conceive that, he sees frightful and horrible looking objects, the impressions of which are so irresistible, that he will vociferate loudly for assistance. At other times, the unfortunate subjects of this disease, will imagine that they see vermin crawling upon their bed or that serpents or some such hideous looking objects are in the room. Again they hear singular noises in the adjoining room or at a distance, or they will affirm that they see bright or dark spots

floating in the atmosphere and they will conceive that they are actually conversing with one, and will attentively listen and talk just as if one were present. They are generally very irritable, and easily thrown into a passion if they be contradicted. They are sometimes very actively engaged in projecting, building and settling accounts, picking up money, or some such visionary employment, and such is the apparent intensity with which they pursue these imaginary phantoms that not unfrequently when spoken to they will appear either unconscious of it, or will tell you that they must not be interrupted in their occupations. The mind and body of the patient are in a state of constant activity, they will not unfrequently run to the window and call out to some imaginary person in the street. Sometimes he insists that he is well, and that he is confined with some sinister intention against him, and will beg of you to let him return to his accustomed occupation. When the disease assumes a more violent form, the patient rages, becomes very delirious, talks incoherently, is with difficulty restrained, and is no longer able to recognise his friends and acquaintances. In the North American journal of Medicine & surgery, vol the seventh, we find a very

interesting essay upon this subject by Doct Coates of Philadelphia, who says that persons afflicted with this disease do not appear to be susceptible of much pain, that they seem to suffer very little from fractures, though they be at the same time subjecting them to the most violent concussion and friction. And when the disease supervenes upon pleurisy or other inflamatory affections attended with much pain, it seems to disappear even to the eye of the most experienced practitioner, or to be reproduced at a later period when the brain and nerves have resumed their usual tranquility. The pulse is generally frequent, soft, and undulating, though if the patient ~~if the patient~~ be young and vigorous, and his constitution unimpaired by long continued dissipation we will probably find it hard, frequent and full. As to the duration of the disease it varies in different individuals, sometimes it will not last more than four or five days, but most generally from ten days to three weeks, sometimes it may be lengthened to six weeks. Dr Armstrong observes that when convalescence is not brought about in the first month, there is a risk of long continued if not permanent alienation of mind. Dr Staughton remarks that he has known mild cases of

this disease when left to nature to terminate favourable either by the supervention of diarrhœa or vomiting. But generally I believe these discharges especially if they be of a profuse character will be apt to bring on a low or Typhus state of the system, especially if they occur in habits worn out by long continued inebriety and dissipation, or be connected with some local or general inflamatory condition of the system. Dr Eberle says he has known the disease to terminate in convulsions or apoplexy, where the patient is of a plethoric habit. Pathology. From an attentive investigation of the symptoms, I am inclined to the opinion that the disease is of the adynamic character, and that it is primarily and essentially located in the brain, independent of vascular congestion or inflamation of that organ, and I am further inclined to coincide with Dr Eberle in the opinion that it is the result of a morbid activity of the brain brought about by the sudden abstaction of an accustomed stimulus, by which its excitability has been long repressed and kept under. If this be not the case, I am at a loss to conceive how the present mode of practice, which is adopted every where with such decided success can be

otherwise than highly detrimental. Dr Coates ascribes it to an increased activity of the sensorium from the production as it would seem of an undue degree of vital action in the brain, and this opinion is entertained by Doctors Eytres, Johnson and many other distinguished continental writers. We find recorded in the eclectic repertory Vol. the 7th page 259. some very interesting observations connected with cases by Klapp of Philadelphia in which he with a great deal of plausibility and ingenuity contends that the disease is primarily and essentially of gastric origin, that is, that, inflamation of the Stomach is the progenicate cause. Dr Slaughton is of the same opinion, and they assert in confirmation of that opinion, that nausea and vomiting are always among the first symptoms of the disease and that upon the operation of an emetic there will always be discharged from the stomach, a considerable quantity of black tarry matter. They further assert that in all their Postmorten examinations they have uniformly discovered inflamation of that organ and finally that the patient more rapidly convalesces under the use of emetics than any other plan of treatment. On the other hand it is asserted by the opponents of the gastric theory and

I think very conclusively demonstrated, that Post mortem discoveries of inflamation in the stomach are very far from being conclusive, that Phlogosis is the proximate cause, for say they, we see inflamation of the mucous membrane of the bowels, every day, supervening upon or becoming the consequence of most of our violent forms of fever, and we should be very reluctant to admit that this state of things is the proximate cause, nay, I am inclined to believe that it can be proved to be the reverse, If the proximate cause of the disease consist as the Gastric Pathologists assert in inflamation of the mucous membrane of the Stomach. I am at a loss to Conceive how they can in accordance with strict pathological principles employ emetics which are manifestly calculated to aggravate and increase that inflamation which they say, is the cause of the disease. It is a doctrine which appears to me perfectly inexplicable and I think that we might with as much propriety use emetics in gastritis which calls for prompt depletion, as to use them in this disease if inflamation be the proximate cause. They say that the tongue is white and furred always in this disease, and that it is indicative of inflamation, On the other hand it is denied that we have white

tongue in every instance and if we should it is no evidence of inflamation for we see it in most of our autumnal diseases and very frequently in the first stage of Typhus fever when we in most cases discover a state of things the very reverse of inflamation of the Stomach. Doct Brown of New York says he has only observed a foul tongue in two out of eight cases and Doct Eberle remarks that within the last six years, he has had ten cases of this disease and that he has paid particular attention to every circumstance calculated to throw the slightest light upon its pathology and that he does not remember having observed more than three cases connected with white tongues, two of which were connected with Pneumonia and one with dysentery. Rognosis, Delirium Tremens is not a dangerous disease unless it be complicated with organic disease or occur in a constitution very much impaired and broken down by excessive dissipation. Dr Armstrong remarks, should it be complicated in habitual drunkards with hepatic affection, that the prognosis in general, will be unfavourable, and he further states, that should the patient have been driven to intoxication by some heavy calamity

that the cure will be difficult. But in most cases especially if the patient be of a robust, vigorous constitution and not long addicted to habits of inebriation and intemperance that the cure will be easily effected. If the patient should sleep quietly for four or five hours it is generally considered a favourable prognostic, though Dr Abercrombie observed that he has known patients to wake up in convulsions. Among the unfavourable symptoms, we have a disposition to Coma attended with a small thready pulse and a cold clammy skin, perpetual watchfulness Subsultus Tendinum; excessive vomiting is also enumerated among the unfavourable symptoms. The supervention of Diarrhea has been known to arrest the disease.

Treatment. If the disease consist in a morbid activity of the brain, as is asserted by a very considerable majority of the profession, induced by the sudden abstraction of an accustomed Stimulus which I am inclined to believe is the correct pathology. Then should our plan of treatment be directed with a view to keep under and subdue that activity upon which the disease depends, and it only remains to be enquired by what treatment that can best be effected. If we

bear in mind that this peculiar state of the brain is not the consequence of the immediate excessive use, but of the sudden abstraction of an accustomed stimulus. Then our indications must be plain and simple, Being nothing more than the administration of some stimulating narcotic with the view of restoring the brain to its original tone. At the same time, though I give it as my opinion that this would be the correct practice in most cases of genuine Delirium Tremens, yet, I believe that we shall occasionally meet with cases requiring the lancet, either in persons of a robust constitution, or where from some neglect in the first stage the opiate treatment has been overlooked and the irritation which is the cause of the disease, be suffered to run on unmolested into inflamation, which is the common consequence of irritation, and which will call for the lancet for its reduction. But if on the other hand the patient be old, and his nervous system considerably shattered, we had better make use of the narcotic treatment without delay, for there not being energy enough in his system to develope inflamation, he will rapidly pass into a state of extreme debility

from which he can with difficulty be extricated by the most decisive treatment. Dr Armstrong prefers opium in these cases and I believe it is preferable to any other narcotic in consequence of its being more speedy in its operation, and also more purely narcotic. Dr Coates very emphatically observes that without the use of opium our patients must die. This to a considerable extent no doubt is true, but I believe that the cure in many cases will be very much facilitated by the previous employment of some gentle purge, such as the Sulphas Magnesia or Soda, especially if the patient be costive and his bowels considerably surcharged with feculent matter, as is very apt to be the case if he be seized immediately after a debauch and I imagine that purging might be further useful by evacuating those acrid and irritating secretions which are constantly accumulating in the bowels and which doubtless tend to keep up morbid excitement in the brain. Dr Armstrong observes that he has known the opiate treatement bring on convulsions when purgations have not been antecedently premised. Dr Coates on the other hand observes that he has never

seen a case in which the opiate treatment was improper.
The quantity of opium which is sometimes necessary to be given before its soporiferous effect is obtained, will be astonishing. Doct Eberle observes that he has given from twenty to thirty grains in divided, but frequently repeated doses before its full effect was produced.
Blood letting— as regards general bloodletting we believe the sentiment of the profession at this time is against it, and very properly so, for there is no doubt if we should have evidence of inordinate determination of blood to the head, but that we can do as much if not more by the direct abstraction of blood from the seat of the disease, than from the general system, and at the same time without subjecting our patient to the risk of falling into that state of general debility which we know to be the very frequent consequence of the abstraction of blood under these circumstances through the medium of the general system. We are inclined to believe that in many cases where the action of the sanguiferous system appear to be preternatural, that the frequent exhibition of nauseating doses Antimonials will be

attended with desirable results by relaxing the system and thereby tending to tranquilize and compose the patients system. Dr Armstrong speaks highly of the warm bath in this disease he has observed the happiest effect in this disease by dashing two or three gallons of lepid water strongly impregnated with salt upon the patient and then immediately wiping and rubbing his body with warm flannel put him to bed and administer thirty or forty drops of laudanum in a little warm wine. The cold bath has also been highly recommended in this disease. As yet we have only spoken of opium in the cure of this disease and will now go on to speak of various other remedies in the Materia Medica which may be very advantageously used in this disease. Camph has been highly spoken of and no doubt will be found very serviceable especially when given in conjunction with opium or in the form of Camph Tinct of opium in large doses, Carb Ammon, & Asafoetida and Hoffman's Anodyne have been highly spoken of, and may be used with advantage in this disease. Emetics have been highly spoken of in this disease, but unless the patients be of a very robust constitution, we should

be rather inclined to look upon them as dangerous remedies. Dr Eberle says that he has sometimes prescribed them with decided advantage, and again he says he has seen the most dangerous consequences result from their use he remarks that he administered to a patient a confirmed drunkard fifteen grains of Tartar Emetic in divided doses. It produced neither vomiting or purging but its sedative effect was most powerful and immediate. In about an hour after taking the medicin his pulse became small and extremely feeble, his body covered with a cold clammy sweat he sunk very rapidly, and expired in a few hours after the administration of the Emetic. He also mentions another case in which an Emetic brought on an exausting diarrhea which soon prostrated the patient beyond the point of reaction. If these dangerous results be the consequence of the use of Emetics we should be inclined to dispence altogether with them in practice. Dr Brown in an Essay on this disease in the Medical recorder appears to be inclined to look upon them as dangerous remedies, with regard to the dietetic part of the treatment much need not be said, all that is

necessary, is, that it should be light and easy of digestion, such as rice, panado and food of a similar nature.

An

Inaugural Dissertation

On Malaria.

Submitted to the examination,

of the Provost, Trustees, and Medical

Faculty of the University of Maryland,

For the degree of Doctor of Medicine,

By Henry White Houston,

Of Delaware.

1832.

Malaria.

The morbific principle denominated malaria seems to have almost entirely escaped the notice of the ancients, tho' its existence has probably been coeval with that of man. Notwithstanding the pestiferous influence of marshes was known long before the time of Lancisi, the credit of being the original writer on "Marsh Miasmata", appears due to this distinguished medical philosopher. The name which he affixed to this poison, is, however, objectionable, in as much as a marsh is not essentially necessary for its production. There is scarcely any portion of our country, which does not under favourable circumstances produce malaria. The most terrific maladies ever produced by malaria have occurred where there were no marshes near to which could be traced the origin of the poison.

That the generation of malaria should take place in sufficient quantity to produce disease, it seems indispensibly necessary that heat, moisture, and dead vegitable matter should be united in due proportions, and these proportions are such as shall favour the decomposition of the vegetable matter. Atmospheric air is also a necessary agent in the process, because, when it is entirely excluded, malaria is generated in very small quantities.

That a considerable elevation of temperature is necessary for the production of malaria, is very evident. The diseases arising from this source seldom occur except in warm weather, and the severity or intensity of the disease is always commensurate with the elevation of temperature, provided the season be a wet and vegitating one. Hence we observe, that the first cases of bilious fever which we meet with after the commencement of warm weather, are of a mild character

becoming more severe and dangerous as the heat increases. The approach of cold weather very soon mitigates the violence of these fevers, causing them to take on a milder character until they finally disappear. Cold countries are comparatively exempt from the devastating influence of epidemic bilious fevers.

Heat, however, is not of itself sufficient to produce this disease to any considerable extent, although it manifestly exercises an important influence over the visceral functions. If heat alone could produce bilious fever, no portions of the tropical regions would be exempt from the destructive influence of this disease either at sea or on land. Besides, some of our hottest summers are remarkably healthy, owing undoubtedly to the absence of moisture or vegetable matter.

Moisture is also necessary for the production of malaria. This is remarkably exemplified in the West Indies, where the rainy season and the dry season

are synonomous terms. It is by no means necessary, however, that moisture should be present in great abundance. Indeed, this circumstance of itself, is sufficient to put a stop to the production of malaria. The overflowing of marshes and low grounds, is universally known to change them from the abodes of sickness to salubrious and healthy situations, so long as the water completely protects the surface from the action of the sun's rays and atmospheric air. This fact we shall consider a sufficient argument against the opinion entertained by some, that moisture alone is capable of producing the diseases attributed to the action of malaria.

We have before observed that dead vegetable matter was indispensably necessary for the production of malaria, and I think we are well borne out in this view of the subject by facts. It has been observed that heaps of flax and other vegetables in a state of putrefaction

have produced a bilious fever in its most violent form.
Those seasons which favour most the luxuriant growth
of vegetables, are universally known to be those which
favour the production of disease in the greatest degree.

That the exhalations from putrefying animal matter
is not capable of producing this disease we consider pretty
well established. Persons engaged in the manufacture
of soap, candles, glue &c., who constantly exposed to the
exhalations from animal matter in various states of putrefaction
enjoy very good health. Neither are slaughter houses
observed to infested with malaria, since no class
of people enjoy better health than butchers. In fur-
ther confirmation of this opinion we may cite for in-
stance, the exhumations made at Paris, when near-
ly twenty thousand bodies in different stages of putre-
faction produced no remarkable sickness, although
the church yard from which they were removed, was sit-
uated in one of the most populous parts of the city. Dr.

Bancroft observes, that, "If the exhalations from piles of bodies destroyed by the plague itself, and corrupting in the open air, are incapable of generating the contagion of fever, it may I think be safely affirmed that there are no circumstances under which animal matter can ever produce febrile poison".

To account for the prevalence of the same disease in dry (tho' never so extensively) as well as wet seasons, some have recourse to an epidemic constitution of the air. The works of Sydenham abound with this doctrine. The supporters of this doctrine admit, that local exhalations from the surface of the earth cooperate with the unknown constitution of the air in the production of disease. But, if exhalations are necessary, they must be sufficient without the aid of the unknown constitution, and it is only upon the supposition of their absence, that the necessity of calling in the aid of other causes, exists. In dry seasons, we find it generally healthy except near water courses

and low marshy situations, where there is sufficient moisture to favour the putrefactive process; and in wet and hot seasons, sickness is general except when the superabundance of moisture is so great as completely to arrest the process of putrefaction, and put a stop to the evolution of malaria. Hence, there can be no difficulty in understanding how certain localities which are the abodes of sickness and distress in wet seasons, are rendered healthy in dry seasons, and vice versa.

With regard to the nature of malaria, our knowledge is very limited. The most minute and careful analytical investigations, have failed to detect any substance possessing the characteristic properties of this poison. Indeed, the air of the most insalubrious climates, is found by chemical analysis to differ in no essential particulars from that of the most healthful situations. Yet, there are some who maintain the identity of malaria with carburetted hydrogen, carbonic acid gas &c. &c. The anal-

-ogy however, between the properties of any of these substances and those possessed by malaria, is not sufficient to justify such conclusions

The action of light carburetted hydrogen gas upon the system, appears somewhat analogous to the action of malaria. It has been observed that this gas when taken into the lungs, produced in a very short time, nausea & vomiting with pain in the head &c, which in some instances have been followed by a regular intermittent, of the quotidian form. Now, it might be said, if this substance is capable of producing intermittent fever, it must be the identical malaria, in question. But, since any cause that debilitates the system and interrupts the harmony of its function, may prove the exciting cause of bilious fever, we may view this substance in the light of an exciting cause, acting upon a system previously under the influence of Malaria. Besides, this gas from its possessing a specific gravity much less than that of atmospheric air, must rapidly escape the

moment it is evolved, and become widely diffused through the surrounding atmosphere.

With respect to the analogy which has been supposed to exist between carbonic acid gas and malaria, we deem it unnecessary to say much here. In addition to the fact so fully established, that chemical analysis is unable to detect an unusual quantity of this gas in air highly charged with malaria, we may state on the authority of Dr. Potter, that carbonic acid gas has never been known to produce fever, even when breathed in large quantities. If such were the fact, all crowded assemblies and ill ventilated apartments, where each individual expires from his lungs, twenty six cubic inches of this gas in a minute, would prove fruitful sources of disease. It is a well known fact that these circumstances, are not sufficient, of themselves, to produce genuine bilious intermittent or remittent fever. It may not be amiss to observe here, that those who advocate this doctrine, and at the same time contend that animal

putrefaction is incapable of producing the poison of malaria, appear to have overlooked the fact, that a considerable quantity of carbonic acid gas is evolved during this process.

The advocates for the opinion, that malaria consists of minute portions of vegitable matter dissolved in aqueous vapour have not we think, been more successful, in endeavouring to establish their favorite hypothesis. It is generally admitted that the vegitable matter undergoes decomposition, and if so, this theory must fall to the ground, because the elementary principles of vegitable matter are of a gaseous nature and when liberated must exist independant of aqueous vapour. This view of the subject would appear to receive corroboration from the generally received opinion that malaria is much more active just after sunset when the dew begins to fall than during the day, and that persons exposed at this time are more liable to have an attack of disease. Although the time here specified is that at which exposure to malaria is most apt to produce disease, it

does not follow as a necessary consequence that the poison is at this time more concentrated than at any other. The sun having withdrawn his heating influence, the lower strata of air have their temperature very soon reduced several degrees by the radiation of calorie which rapidly takes place from the earth's surface. This sudden reduction of temperature, brought to act upon the system in a state of relaxation from the influence of heat, deranges the healthy exercise of its functions and increases its susceptabelety to the action of the morbific agent. Hence it is obvious, that the greater liabelety of contracting bilious remittent fever after sunset than during the day, from exposure to its cause, must depend in a great measure upon the circumstance just mentioned.

It is perhaps unnecessary that we should consume any more time in endeavoring to prove our entire ignorance of the nature and constitution of malaria. We will therefore proceed to notice some of its physical properties.

Malaria possesses a greater specific gravity than atmospheric air. This is proved by the fact so well established, that persons sleeping in elevated chambers are less liable to disease from this cause than those who lodge on ground floors. For the same reason hills and elevated situations are much more salubrious in warm weather than the adjoining low grounds. The exceptions to this rule mentioned by Bancroft and others, are, we think, satisfactorily explained by the author just mentioned. He observes, "But in these cases it seems probable that the soil, at or near the tops of these hills contained matters suited to the formation of marsh miasmata, with sufficient proportions of clay to retain the necessary moisture. There can, indeed, be no doubt, that this is the case of the Morne-Fortuné, which I observed to be very wet."

The distance to which malaria may be conveyed from its source and retain the power of producing fever, is variously estimated by different authors. It is evident however, that a great deal will depend upon the nature of the surface over

which it passes, together with the degree of concentration in which the poison exists. Dr. Bancroft limits this distance to "a quarter or perhaps half a mile", but, as we before observed the nature of the surface will very much influence the distance, since water seems to possess the property of absorbing this poison or in some way rendering it inert. This fact was well known to Dr. Rush, and induced him to propose placing vessels of water in the rooms of persons affected with yellow fever, for the purpose of destroying the febrile poison. Dr. Ferguson seems also to have been well aware of this fact when he says "it is certainly absorbed and lost by passing over even a small surface of water".

From the observations of some it would appear, that a dense woods or forest, is capable of intercepting the progress of malaria. That a high wall or a chain of elevated hills, is capable of arresting its progress and protecting the neighbouring inhabitants, from its pestiferous influence, is no doubt a fact, and one which admits of explanation. The

specific of malaria, as we have before observed, being greater than that of atmospheric air, it, of course cannot ascend to pass over these obstructions, and is consequently diverted from its course.

From a fact related by Dr. Dalzille, it would appear that lime posses the property of destroying the febrific influence of malaria. This gentleman (as quoted by Dr. Rush) once checked a bilious fever, by spreading twelve barrels of lime over a piece of marshy ground from which the exhalations which produced the disease, eminated.

With regard to the length of time that elapses between the reception of malaria into the system and the development of disease, different opinions are entertained. Very much however, must depend upon the state of the system and the degree of concentration in which the morbific agent exists. In some instances malaria has been known to produce fever in a few hours, and facts are on record which render it highly probable that the poison may remain in the

system several months when the exciting causes are all carefully avoided. It is upon this principle that Dr. Bancroft seems disposed to account for vernal intermittents, considering these diseases the result of malaria received into the body during the preceding summer or autumn, and rendered active by some exciting or proximate cause of fever in the spring. In general, there seems some foundation for believing, that the violence of the disease is always in proportion to the suddenness with which it makes its appearance, after the morbific cause has been applied to the body. This is observed to take place more particularly in persons unaccustomed to the action of malaria, while those who have long resided in miasmatic districts, and who have become "seasoned", breathe with apparent impunity the air which contains this noxious agent.

The greater susceptibility to the influence of malaria which exists in persons from the north, than those who reside in more southern latitudes, is ascribed by Doctor Bancroft, solely to the influence of temperature upon the system.

This difference of susceptibility, we conceive, cannot depend altogether upon the influence of temperature, but is undoubtedly owing in a great measure to a well known law of the animal economy, by which all deleterious agents gradually diminish the susceptibility of the system to their influence by long and repeated action.

With respect to the action of malaria upon the system and the part upon which it primarily makes the morbid impression, a considerable diversity of opinion exists among physicians. Some are of opinion, that the stomach is the first to suffer, and that the effects are thence radiated to the rest of the system. This opinion seems to be reviving with new force in conformity with the prevailing gastric pathology. We may I think safely defy the abettors of this theory to show how miasmata can find access to the stomach in sufficient quantity to produce disease. The only channel through which malaria can reach this organ is through the medium of the food and saliva, and

the quantity taken in in this way must be very small indeed compared with the immense quantity of this poison taken into the lungs at each inspiration mixed with the atmosphere. Here the morbific principle is largely applied to a great extent of membrance equally delicate in structure and one possessing as highly sensitive properties as that which lines the stomach. In many cases it it would appear that the lungs are much more sensitive to the impressions of morbific causes than the stomach since small pox virus when swallowed into the stomach will not infect the system, whereas, a very small quantity of this poison inhaled, from those labouring under this disease, is capable of exciting the small pox.

It is extremely probable, therefore, that all aeriform morbific agents act upon the system through the medium of the lungs, and produce disease by being absorbed into the blood or by acting upon the sensitive surface of these organs. That aeriform substances are

capable of being absorbed into the circulation and act upon the system through the medium of the blood, may be inferred from the familiar fact that the inhalation of garlic fumes as well as those of turpentine and various other substances, is followed in a very short time by the manifestation of their peculiar odours in the urine. It is highly probable that the extraordinary effects of nitrous oxide and of the vapour of sulphuric ether, when inhaled, arise from their being absorbed into the circulation and conveyed to the brain through the medium of the blood. If the poison under consideration be absorbed into the circulation, we can't conceive it necessary that "a local irritation" should be excited in some portion of the vascular system, and that the impression should be conveyed thence to the sensorium commune to be reflected throughout the system; but, think it would be much more rational to suppose, that the morbific agent is conveyed directly to the brain, upon which the primary impression is made.

Whether the morbific cause makes its primary impression upon the nerves of the lungs, which is then transmitted to the sensorium commune, or whether it be taken into the circulation and conveyed through the medium of the blood, it seems probable that the cerebral functions are first impaired, and that the morbific influence is thence propagated to the whole nervous system. As each organ or structure in the animal economy, possesses vital properties peculiar to itself, there will necessarily exist a difference in the susceptibility to the influence of the transmitted or reflected morbid impression. The power of the heart and arteries appears evidently to be diminished, consequently they are incapable of sending the blood into the minute capillaries of the surface and other parts, and the skin becomes pale, cold, and shrunken. In this state the blood having retreated from the capillaries must of necessity accumulate in the large veinous cavities in the neighbourhood of the heart and liver. The venea portarum

originating and terminating in capillary tubes, it comes very little assistance from the vis a tergo, in the circulation of the blood it contains, and hence is peculiarly liable to suffer an accumulation of this fluid to take place in its cavity. When the portal circle becomes congested we may readily conceive how most of the viscera within the abdomen have their functions more or less disturbed by the impediment which is offered to the return of blood from these organs.

Different theories have been advanced to account for the reaction which sooner or later takes place in fever. The advocates of the physiological doctrine, as it is called, would say that reaction commences in the mucous membrane of the stomach and bowels, and extending its influence to the heart and arteries, stimulates them to an increased exercise of their functions, by which means the phenomena of fever are developed.

Another, and in our opinion, a more plausible

theory has been based upon the principle generally admitted, that wherever debility exists, the excitability of the part is increased. Now, in this case the fulness of the vena cava continually increasing, and the heart during its feeble action having its excitability constantly increasing, this organ is at length stimulated to an increased exercise of its functions, and the phenomena of fever became developed. This febrile excitement continues until debility or relaxation again comes on, and gives rise to a new accumulation of blood in the vicinity of the heart, at the same time that the excitability is accumulated, and a second paroxysm of febrile reaction is produced.

HUDSON

An

Inaugural Dissertation

on Asthma

Submitted to the examination

of the Provost

Trustees, and Medical Faculty,

of the

University of Maryland.

For the degree

of Doctor of Medicine.

By

Samuel H. Birckhead

of

Maryland.

1832.

To

Alexander Clendinen M. D.

Dr. Sir.

As a testimony of that respect, and esteem, which your professional and private life, equally claim, and especially as a public acknowledgment of the many obligations which I owe to you, for various acts of kindness towards me, (which, though perhaps undeserved, are not unremembered) permit me the honour of inscribing to you the following pages.

Your most obedient,
Humble servant,
The Author.

Asthma

Description

The term Asthma as derived from the Greek word ἄσθμαζω which signifies to breath with great difficulty is very characteristic of the disease. The ancients however considered every case of difficult respiration as asthmatic, and regarded dyspnoea as a synonymous term, which however we conceive to be as widely different as catarrh and Pneumonia. Writers upon this subject are for the most part chargeable with one general fault, that of being too fastidious, and consequently perplexing in their diversified divisions, and subdivisions of the disease into various genera, and species, as they can be of no practical utility, but on the contrary serve to mislead and confuse the perception, especially of the young enquirer. It will readily be perceived from the foregoing hint that we are by no means disposed to admit of the different varieties, such as the dry, humid, spasmodic, inflamatory, and intestinal asthma, which have been so strenuously urged by different authors, but would rather regard them as modifications of the same disease, occuring under certain circumstances, as with regard to its stage, and duration -

Asthma is a disease which is not peculiar, or confined to either sex particularly- According to the observations of Dr Bree it appears that adults are more liable to its attack, than children, though instances are recorded in which it made its appearance in infancy, and was mistaken for the croup; which occurring at that age, it is said very much to resemble, and between which it is difficult to mark any conclusive diagnosis-

Preceding a paroxysm, it is usual for the patient to experience symptoms premonitory of its approach such as langour, flatulency, itching of the skin particularly over the neck, and breast, nausea, headache heaviness over the eyes, pale urine, disturbed rest, and a sense of straitness, fulness, and anxiety about the praecordia- As the evening approaches Remarks Dr Bree the weight over the eyes increases, and the patient becomes very sleepy, and there is also frequently experienced at this time a sensation of heat over the neck and breast, with a tingling in the ears- A strange circumstance in the history of this disease, is its more frequent occurrence during the night than at any other time; a fact applicable as opposed by some, on the ground, that respiration is carried on more easily in the erect, than recumbent position, and moreover being so much of a voluntary action, it is considerably facilitated by the concurrence of the will which during sleep is wanting; and hence the most propitious time for its attack—

The paroxysm comes on, for the most part, sud-denly, the patient is roused up, perhaps out of a profound sleep, with a distressing sense of op-pression, or tightness, about the chest, with his respiration so much impeded that he almost imagines the atmosphere surrounding him to be deprived of the principle essential to animal existence, and as it were involuntarily flies to a window, or some such place, as if to obtain a free and fresh supply. Respiration, and expiration are performed with great difficulty, and attended with a wheezing sound, and a strong disposition to cough, which is greatly aggravated by any effort at speaking. So laboriously is the function of respiration performed in many instances, that the patient is totally unable to maintain the hor-izontal or recumbent position, but is induced to avail himself of every advantage, and as one, he assu-mes an erect, or semi-erect attitude, which perhaps he is unable to change until the paroxysm shall have gone off. However suddenly the paroxysm may have come on, it always goes off slowly. The patient seldom realizes any alleviation in the violence of those symptoms which appear to thre-aten him with almost immediate extinction of life; until the approach of morning, at which time a gradual remission commonly takes place. Respiration generally becomes freer, and the patient does not experience the same degree

of pain, and inconvenience in the act either of coughing, or speaking— The cough which in the beginning was hard, and dry, is frequently at this time, (as it were through the sanative efforts of nature to relieve herself of a source of irritation) attended with a free, and copious expectoration of viscid mucus, varying in colour from a blackish hue, to a reddish tint, which is generally followed by a temporary mitigation of symptoms, affording thereby tranquility to the sufferer—

The circumstance of this mucus expectoration being much more abundant in some cases than in others, though unimportant (as it actually is) was recognized by the humoral Pathologists as one of the most important symptoms of the disease, and therefore gave rise to, and was made the basis of their generic of it, into the dry, and humid Asthma— It has been said by some (among whom is Dr Cullen) that the pulse is generally natural, but in this he has certainly erred, for although it may differ but very little in some instances from the natural standard, yet this difference is nevertheless very appreciable, and in the majority of cases is even distinctly manifest being in the young, and plethoric preternaturally frequent, and hard, and in the old and infirm weak, irregular, and intermitting— The surface of the body suffers little or no change either in temperature, or colour, though sometimes it appears

that the countenance is bloated, and livid owing to defective decarbonization of the blood, in its circulation through the lungs and again, there is also sometimes discernible a slight increase of heat, with discoloration of the skin, which after having continued for awhile, begins gradually to fade away, leaving the surface pale, and the muscles apparently shrunk. The urinary secretion is very much increased during the continuance of the paroxysm giving rise to a copious flow of limpid urine, but after it is over, the fit, the quantity voided is of the ordinary amount, of a high colour, and deposites a lateritious sediment upon standing. The bowels are irregular in their actions, being for the most part too lax, though sometimes they may be obstinately constipated.

Although as I have said the patient may enjoy a remission in the violence of the symptoms, during the succeeding day, he nevertheless experiences more, or less constriction across the chest, which renders him incapable of making any motion, or exertion of the body, lest he should thereby increase his misery. As it is has been said that morning brings repose, to the approach of night brings pain and anxiety. An accession of symptoms similar to those that have already been described again comes on, and after recurring in this manner

for three, or four days in succession; the symptoms becoming gradually milder, every succeeding paroxysm, till the disease yields entirely, and the patient without any further annoyance is left to enjoy once more his accustomed rest, thus terminating the asthmatic fit— One feature in the history of this disease that should not be passed over unnoticed, is its liability to periodical recurrence and if the asthmatic diathesis be very strong is capable of being excited by the operation of very slight causes, some of which I shall proceed forthwith to enumerate—

Exciting Causes!!

With modern pathologists, we are inclined to think, that too much importance cannot be bestowed upon an intimate, and correct knowledge of the exciting causes of this disease— From the sentiments of Dr Bree on this subject, we may learn to appreciate the great importance of this kind of knowledge— He says that he considers them, i,e, the exciting causes, as qualified by their importance to become the basis of a practical division, and objects to acknowledge any difference in the phenomena of the asthmatic paroxysm, to attain this object—

Before proceeding any farther, it may not be amiss here to observe, that asthma appears to be

justly entitled to a rank among the diseases depen-
-ding upon hereditary predisposition, and in this case
it is said to be owing to some defective organization
of the tissues- There is also an acquired predispos-
tion, which appears to consist in a weakened, and
irritable condition of the respiratory organs; both
of which are readily excited into action, and in many
instances, by the operation of very slight causes-
Particular states, or conditions of the atmosphere
under circumstances of predisposition, not unfre-
quently give rise to the full development of a
paroxysm, varying however in its effects upon
different individuals- Thus, while one asthmatic
appears to derive comfort from breathing the most
impregnated, and smoky atmosphere, another would
shun it, as a certain prelude to an attack-
Some again experience more inconvenience during
the Summer season, while others dread the approach
of Winter- Long continued, and neglected Catarrhs
very frequently give rise to it- and in cases where
there is no predisposition especially, much more
frequently than any other cause- The inhalation of various
kinds of irritating matter, floating in the atmos-
phere, such as dust, tobacco smoke, metallic fumes
sulphurous vapour &c have in many instances
excited a paroxysm, and which is not at all sur-
-prising; when we reflect upon the nature, and
structure of a membrane so delicate, as the
mucus lining of the bronchia, and air cells of
the lungs-

In some cases of uncommon idiosyncrasy, a fit has even been produced by the mere smelling of odorous essences - An instance is related by Simmons in which the disease was caused by the odour of roses, and Dr Scott of Northumberland mentions several cases of the most imminent danger, produced by the accidental inhalation of the effluvia of Ipecacuanha, whilst pulverizing it. Any cause which operates upon the action of the heart, and arteries, thereby accelerating the circulation, and determining it particularly to the lungs; may produce it, and of these we may enumerate severe exercise of any kind, loud speaking, exposure to cold, and the suppression of accustomed evacuations, as of Haemorrhois, or the Catamenia - Some instances have occured which was occasioned by metastasis of Gout or Rheumatism, and frequently by repelled eruptions Irritating substances lodged in the throat, to also Calculi in the bladder have induced a fit -
There are yet some causes, which are supposed to operate exclusively through the medium of the nervous system, such as the violent emotions, or passions of the mind, and close, and intense Study - Such is the force of habit, that it has been said, that after a repetition of paroxysms in some instances, the disease has been perpetuated by its sole agency, and has become so fixed in the constitution, as only to be equaled in point of inveteracy, by that of Epilepsy -

Proximate Cause.

11

The investigation of this very interesting, but recondite point, in pathology, has occupied much time and engaged much speculative learning, though unfortunately without having arrived at any satisfactory conclusion— Dr Cullen, who seems to have taken some interest in the prosecution of this inquiry; ascribes it to a preternatural spasmodic contraction of the bronchiae— This opinion though claimed as his own, appears to have originated with Hoffman, and was therefore merely borrowed, as was the same case, in his proximate cause of fever— The same has also been adopted, and advocated, by Wells, and others— How or in what manner, Dr Cullen could account for the phenomena of asthma by this theory, we are unable to conceive and if we but advert to the anatomical structure of the parts implicated, we shall at once be struck with its absurdity— Muscular fibre is essential to spasmodic action, or contraction— If we now admit their existence, and suppose them to be endowed with sufficient energy to give rise to the symptoms of asthma, what would be the condition of the individual?— Would he not be constantly exposed to the danger of suffocation from an obliteration, of the air passages, by their violent, and spasmodic contraction, which is

liable to be excited by the action of so many Stimuli- We think that he would- Dr Cullen has made various attempts to maintain his point, but his reasoning has been unsatisfactory, and inconclusive, and we conceive proves nothing- Dr Bree who enjoys the credit of having written a most elaborate treatise on this disease, has assigned as its proximate cause, an irritation located within the air cavities and occasioned by the effusion of a viscid, and irritating serum- Parry makes it to consist in a vascular turgescence of the Bronchial membrane, by which the air cells are mechanically denminished- Eberle ascribes it to a peculiar irritation of the pneumogastric nerve, in consequence of which, the regular transmission of the nervous influence to the lungs is interrupted- Conceiving it to be useless, or in fact a mere waste of time to attempt to follow out all the various hypothetical speculations upon this abstruse point. I shall content myself by such as I have adverted to, and proceed to give such views as I have adopted, and which I consider as qualified to account in a more satisfactory manner for the various phenomena of the disease Though morbid anatomy (as from it we gather our pathological deductions,) has revealed but few facts and cast but little light upon this subject, we are nevertheless disposed to think that whatever has been derived from it tends to substantiate, and confirm the correctness of our views- Therefore in reasoning

from the data, afforded us by autoptic phenomena and other circumstances of like import; we are inclined to think that Asthma depends essentially upon venous Congestion of the lungs: owing to a weakened condition of the veins; produced by a defective supply of nervous influence, or debility of the nerves themselves— The veins thus distended and engorged with blood must necessarily embarrass the lungs in the performance of their function, by their immediate, and mechanical pressure upon the air cells, and in this manner give rise to the development of the asthmatic phenomena— For these views we are indebted to our learned Professor of the theory, and practice of medicine (Dr Potter) who was the first to inculcate them, and by whom they have been maintained upon sound, and philosophical principles—

Diagnosis

Upon this point, we need say but very little, so clearly defined, and so characteristic are its symptoms— At all events, if we carefully notice them, and simply collate them, with those of such diseases, as have been said to bear some affinity, or similitude to it, (as Catarrh, apoplexy hydrothorax, pleurisy &c, we shall at once be able without a shadow of doubt, to state the nature of the disease—

Prognosis,

Notwithstanding the alarming, and threatning symptoms of the disease, it cannot be viewed as one of immediate or imminent danger in general, but in proportion to the relative intensity of the case, may the danger be estimated. Thus, if the disorder be of long standing, with frequent recurrence, and the paroxysms instead of continuing but for a few hours should last two, or three days, if the spasm of the chest be violent, or if the quantity of mucus in the lungs be great, with a laborious respiration; if it is accompanied with tubercles, or malformation of the chest, and occur in a debilitated subject, whose constitution has been exhausted by a consumptive or scrofulous diathesis, the case is more or less unfavourable. But on the contrary, if the disease be recent, with no malformation, respiration free and easy after the paroxysm has subsided, and the cough, and expectoration mild, with a constitution free from defect, either of a consumptive, or scrofulous nature, the case may be represented as arguing more favourably.

Treatment,

Having considered the symptoms, causes &c, we have next to notice the treatment, a point upon which authors have however split as widely

as any other connected with the disease; and while Dr Cullen on the one hand, declares that it is seldom cured, tho' admitting of alleviation; and Dr Bree on the other endeavours to show that the paroxysm itself is susceptible of but slight relief and that the great desideratum of the medi=cal treatment, is to ward off an attack; and thereby effect a permanent cure; I would beg leave to differ from them both; and regard it, as being capable of both, alleviation, and cure— The judicious mode of treatment appears to sug=gest the propriety of dividing it into pallia=tive, and radical, or that which is to be pur=sued during the fit, and that during the intervals— The principal indications in the paroxysm appears to be, to unload the blood vessels of their preternatural turgescence and to promote expectoration— To answer these indications, (more especially the first, venesection naturally presents itself to the mind as a very efficient means; and notwithstanding the animadversion of some authors upon this subject; we are disposed to esteem it, as justly entitled to be ranked as one of the most efficient, and useful remi dies, in the management of many cases— Both theory, and practice tend very much to satisfy us, that the alarming apprehensions entertained by some, with regard to its effects, are entirely

gratuitous, and unfounded, provided it is resorted to, with proper discrimination— Professor Potter, (to whose judgment, and opinion great deference is due,) observes that in strong subjects, in almost all young persons and in many old ones, whose constitutions have not been enfeebled by the frequent recurrence of paroxysms; blood-letting is not only the most effectual remedy, but in many cases it is radical— In further confirmation of its very salutary effect, the Dr states that he has had the satisfaction in a variety of instances, of witnessing the removal of every asthmatic symptom, even before the removal of the ligature from the arm— In one case that came under my observation, in the course of my limited experience the patient being upwards of sixty, but with a strong, and tense, pulse, bloodletting was eminently serviceable, appearing in fact to be almost the only thing interposed between time, and sanity, and required to be frequently repeated— However, in recommending this remedy, we should point out the necessity of carefully discriminating between a case of congestion accompanied with a strong, and tense pulse, and one in which the nervous system appears to be almost prostrated occurring in old, and debilitated subjects, with a weak, and feeble pulse— If resorted to under these circumstances, it must certainly be productive of injurious consequences, and therefore

should give way for more appropriate remedies— As a general rule nevertheless; we think, that we are warranted in recommending the employment of the lancet in all young, and robust subjects, and to adapt the quantity to be drawn the urgency of the case— Such are the sympathies existing between the heart, and lungs, that the pulse should not to be considered as a safe index; and therefore should not guide us too far, lest it might bring upon us the reproach, of having sacrificed the life of our patient from neglect to employ proper means— As auxiliary to blood letting in unloading the vascular system of the lungs, the patient should avoid all exercise, his room should be cool, and well ventilated, and he also, should sit in the erect posture or when in bed lie with his head, and shoulders elevated by means of pillows— A case is related by Withers, in which the patient had not laid down for fifteen years, but sit up, with his head resting on a staff—

Purgatives are a class of medicines which have been recommended in the treatment of this disease, and in the first stage, when the symptoms indicate bloodletting, they may certainly prove highly serviceable, for this purpose a dose of jalap, or jalap and cream Tartar, or Sulph. magnesia, will answer every indication— In the last or nervous species

however, their administration will almost invariably be attended with injurious consequences; a circumstance which should therefore render us extremely cautious in discriminating between these opposite conditions of things—

Emetics have also been prescribed, and by some they are regarded as remedies of decided efficacy upon this point however there is great discrepancy of opinion— When administered under certain circumstances, as for instance in such cases in which the paroxysms succeed soon after a full meal, they may perhaps be serviceable, but to their great utility, or general applicability we are not disposed to subscribe—

The great relief generally obtained by expectoration, and the evident efforts of nature to accomplish this object, naturally suggests to us the expediency of resorting to expectorants, as means calculated to promote this action—

Of this class of articles, none enjoyed at one time a greater reputation for its remediate property than Squils; in fact such were the virtues ascribed to it, that it was regarded in the light of a specific, and hence arose Dr Floyers celebrated specific, the Vinegar of Squils— We are informed upon the authority of Dr Floyer, so greatly are its powers increased, when prescribed in combination with hyosciamus, and nitric acid that he has

known, a single dose taken at bed time in several instances, completely to avert a threatening paroxysm— From the experience of more modern practitioners however it appears that its powers have been overated, but notwithstanding it must be acknowledged, a remedy of some value, when judiciously prescribed with regard to the particular circumstances of the case— The Polygala although generally considered as too irritating for young persons, is perhaps a remedy of considerable efficacy in that variety which we have denominated nervous, as it occurs in old subjects, and also such as have suffered from frequent, and repeated attacks— In such cases as are complicated with peripneumonia notha, which is not unfrequently the case in the spring season, it is said to be an invaluable remedy— When prescribed in combination with the acetate of ammonia it is said to constitute an excellent formula, applicable to the febrile stage of such cases; and which in a very prompt manner induces expectoration, and promotes both the perspiratory, and urinary secretion— It has moreover been highly recommended in such cases as are connected with a congested, or torpid condition of the liver, or some other abdominal organ— and as particularly applicable to such cases in which purging either by calomel, or some other cathartic has been premised— In fact,

Senega appears to operate as a kind of general evacuant; for while it increases the discharge of mucus from the lungs, it also augments the flow of perspiration, and urine, and sometimes operates, as an emetic, and purgative—

The Lobelia Inflata, or Indian Tobacco, is a remedy that has likewise been employed in this disease, and from the successful employment of it, in the hands of modern, and experienced practitioners, we would recommend it, as deserving of our attention—

From respectable recommendation, Coffee appears to be an article highly deserving of our notice, as being particularly adapted to the stomachs of asthmatics— Sir John Floyer remarks, that during his residence at Lichfield he derived the most decided advantage from the use of a strong decoction of this article— The practice has subsequently been adopted by others, and with equal success— In a letter from Sir John Pringle to Dr Percival, he observes, that on reading the section on Coffee in the second volume of your Essays, one quality occured to me, which I had noticed of that liquor, confirming what you had said of its sedative powers; and doubtless it is the best abater of the periodic asthma, that I have ever seen— The infusion should be prepared from the best Mocha, recently burnt, and immediately after grinding it— The usual mode of administering

it, is an ounce to a dish, to be repeated fresh
after an interval of fifteen minutes, without
either milk, or sugar—
The inhalation of the vapour arising from warm
water, either from the mouth of a teapot, or Mudges
inhaler, has been recommended as of service—Some
practitioners prefer medicated vapours, and with
this view have advised the employment of several
articles; among which we may mention—That
arising from an infusion of Columbo, to which
has been added a small quantity of ether, The
vapour from an infusion of hemlock leaves has
also been said, to be serviceable in that species
which has been denominated the dry, but injuri
ous in the humid, or that accompanied with
expectoration— Whether the efficacy of either of
these vapours is enhanced by their medication
or in fact, whether either simple aqueous vapour
is admissable, much less useful, appears to be
doubtful— Dr Bree in noticing the inhalation
of the ethereal vapour, of the first formula,
unhesitatingly condemns its employment,
and emphatically declares that he has known
it to do much harm— The same distinguish
author further states, that heat, and mois
ture conveyed to the lungs, in any form
is improper; an opinion which seems to
be strengthened by the fact, of the very
agency of these two causes in the produc

=tion of the disease - Much good was, at one time ascribed to the smoking of tobacco, Stramonium, and digitalis, but at present owing to their deleterious effects upon the System the practice is seldom resorted to, but in case it should, Care, and discretion is required -

Narcotics, and Antispasmodics have been resorted to, upon the principle that the disease consists in spasm, or irritation, as the most appropriate remedies, that we could employ, but however they do not appear to be entitled to that degree of importance, which may have been attached to them, - given seperately their administration is seldom attended, it is said, by any decided advantage, and frequently by heating the System unnecessarily have prolonged the Paroxysm -

Dr Bree in relating his own case, mentions, that on the accession of a fit, he took four grains of solid Opium, which produced nearly an apoplectic Stupor for two days - A few hours after taking it, a most debilitating sickness supervened, with incessant efforts to puke - The labour of the respiratory muscles abated, but the wheezing evidently increased, accompanied with an intense headache, and a countenance more turgid than usual, the pulse also which was at first strong, and quick, afterwards sunk into great weakness; the paroxysm likewise came on

four hours earlier on the succeeding day than usual— He tried it in small doses in several subsequent fits, but in no instance without much general mischief, and little or no real benefit— There is perhaps no disease in the nosology, in which anodynes promise less benefit than in this, and therefore if ever employed it should be with cautious discrimination, confining them strictly to the second, or nervous stage— Dr Bree is of the opinion that neither Narcotics, nor Antispasmodics can prove effectual only in such cases, in which the disease is of long standing, and recurs from habit, or sympathy and in which our design is merely to vary impressions— Under these circumstances, he says, Opium either separately, or combined with ether, by which its powers, it is said, are considerably increased, may prove advantageous— In recommending antispasmodics, suffice it to say that they have all been more or less employed, but perhaps there is not in the whole catalogue one that is preferable, or that possesses greater efficacy than Asafoetida, when prescribed under certain conditions of the system, and case as above stated—

Acids says Dr Bree may also be combined with narcotics, to advantage, and upon this principle is constructed his favourite anodyne draught, which is composed of three grains

of henbane, six minims of nitric acid, and ten of the tincture of squills, to be repeated every three or four hours during the paroxysm— And moreover he states that "many patients who had taken the most powerful antispasmodics have assured him that none was so serviceable. The above formula has been adopted by Dr Greg-ory, and he thinks that on the second or third day, when the tendency to secretion has increased, it may be used with beneficial effect as in its composition is embraced both an expectorant and anodyne, which thus by qual ifies it for the fulfilment of a double indica tion—

Diuretics have been prescribed with seeming advantage in this disease, and certainly when it is connected with an hydropic diathesis, they constitute a very eligible class of remedies—and with this view the saline diuretics are deservedly preferable. In case there should exist visceral obstruction, they may be advantageously combined with mercurials; for this purpose the acetate of potash may be given in the quantity of half an ounce two or three times in the course of the day, to be followed by eight or ten grains of calomel at night— In such cases as are connected with a disordered condition of the primæ viæ, the chalybeate still strong, Bree recommends the carbonate of soda, as

extremely useful, to be taken in doses of eight grains every night=

With respect to digitalis as a remedy in this disease we can say but very little; but from the authority of Dr Sugrue of Cork it would seem to be entitled to our attention- In a case mentioned by this gentleman, in the Medical and Physical journal page 329, he informs us that at the time his patient applied to him for advice, he was pale, and emaciated, complained of a distressing sense of suffocation, and constriction about the chest, his sleep was very much disturbed, and after dozing for an hour or so on going to bed, was frequently roused up with such a degree of oppression as to compell him to sit up during the remainder of the night, and often thought that he could not survive till morning. His pulse was at the same time about an hundred and twenty, and feeble- The Dr states that he commenced the treatment by directing the tincture of digitalis to be administered in doses of fifteen drops twice a day- From some circumstance he was unable to see him again for two weeks, at the expiration of which time he called upon him, and was agreeably astonished at the very manifest improvement which had taken place in his appearance- His countenance was much fuller, his complexion was much more healthy

and his pulse was reduced to about ninety, and tolerably strong— The patient himself states that after he had taken the medicine for three days such was the relief afforded him, he was no longer compelled to spend his nights sitting up, but was enabled to enjoy a comfortable sleep, after which he felt himself refreshed, a sensation to which he had been a stranger for several months— At the end of a week he could sleep five or six hours, and his appetite and general health returned in the same proportion—

Dr Teague further remarks, that in every other case of asthma in which he employed Digitalis the most violent symptoms were alleviated, and the general health obviously improved— One invariable effect remarks the Dr that particularly engaged his attention, was; that the expectoration was diminished, and at the same time the necessity for it appeared to be removed, a fact that points out a striking difference between its action, and that of antimonials— Dr Turner was in the habit of prescribing this article in combination with a small quantity of opium, the success of which has been supported by the practice of Dr Percival— In the hands of Dr Bree however it appears to have been rather injurious— Given in combination with Fowler's solution in doses of ten drops of each repeated three times a day, it is said, to have succeeded in the most unequivocal manner in

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relieving asthmatic paroxysms, which had resisted every other remedy—

Epispastics, and also issues, and setons, are regarded as valuable remedies, when the disease has been occasioned by the sudden suppression of some accustomed discharge, or the repulsion of an eruption, though they can be only of ulterior advantage, by establishing a vicarious action corresponding to that, which has been checked. M Bonifay relates a case of a corpulent man that suffered severely from reiterated attacks of asthma, and who was accidentally cured by inoculation with the itch, which acted upon the same principle of blisters, issues &c. Dr Eberle in his valuable work on Materia Medica, informs us, that the Hydro-cyanic has been employed with advantage by Drs Oliver & Granville, but however I imagine the practice is one that has not been generally adopted, and if ever, it is scarcely necessary for me to say that its administration should be conducted with the greatest caution—

From the respectable authority of Drs Jackson and Oliver of Boston it would appear that the Tela Araneanum administered in the dose of five, or six grains, every four, or five hours, has produced the most happy effect. Dr Eberle mentions a case, which Dr Jackson succeeded in relieving, although connected

with hereditary predisposition, and malformation of the chest, twenty grains produced sound sleep, which the patient had not enjoyed for six years before—

The oxide of zinc is another remedy that has been employed, and in the hands of Dr Withers with some success— The cases in which he used it were variously complicated; as with catharrhus senilis, rheumatism, chronic weakness, and obstruction of the catamenia— His rule of prescribing it, was, if it was beneficial in the slightest degree, to persevere; and at last it would generally succeed— From the circumstance of its frequently operating with activity upon the bowels, it seems to be advisable, when employed to commence with small doses at first, and gradually increase them according to circumstances— These constitute the principal remedies to be employed during a paroxysm; which is but a mere palliative plan of treatment, and according to our division of it, we are now brought to consider that which is to be pursued during the interval, or the radical treatment— This appears to be more simple and to have but two indications in view, which are, first, to carefully avoid any of the exciting causes, and secondly, to give tone to the capillary vessels of the lungs, by endeavouring to promote the strength of the

stomach, and system in general— In order to succeed in the accomplishment of these objects, it is obvious that a great deal depends upon the cooperation of the patient himself in fact the fulfilment of the first indication seems to be exclusively the duty of the patient by carefully avoiding, and abstaining, from every thing that would tend to retard his recovery or favour a recurrence of the fits— To facilitate the efforts of the patient, recourse may be had to tonics, such as the different preparations of iron, bitters, and mineral acids— In order to insure success in the use of these remedies, we should persevere in their employment, and if we fail with one, it should only incite us to exercise our ingenuity in selecting another, and not abandon the principle, because of unsuccess in any one article— Of the various articles, which be classed under this head, the preparations of iron are decidedly preferable, using rhubarb during their administration to keep the bowels open and ability to correct acidity—

The use of the cold bath, daily exercise, and if practicable frequent changes of air, scene and amusement, are important adjuvants and would contribute very much towards expediting recovery—

With regard to diet, it is necessary that

the patient should select such food as is light, and easy of digestion, of lean beef, mutton &c, and sedulously abstain from all articles of a flatulent nature and particularly vegetable food— The should take his food, in small quantities and frequently— in a word, it appears that every precaution necessary for a dyspeptic in reference to diet, is also applicable to the asthmatic— The best beverage for an asthmatic is cold water, or water acidulated, with either vinegar or sulphuric acid— Malt liquors are hurtful and should be avoided— Barley water, and all simple diluents, are apt to ferment on the stomach, and therefore are injurious— If the patient is old, and weak a small quantity of Madeira, Sherry, or Port wine may be allowed him—

Finis—

An

Inaugural Dissertation

On Anasarca.

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By

Reuben H. Gray

of

South Carolina

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In writing the following dissertation, I shall confine myself to the consideration of that condition of the cellular tissue, which consists in an effusion of serum into its cells constituting the disease denominated anasarca. This is indeed one of the most frequent diseased conditions of this tissue; occurring not only as a primary affection, but as an attendant, or as a consequence of many other diseases. This affection presents different appearances according to its extent, locality, duration &c. It may be either general or local. When local or confined to a particular part, it is called Edema. This may be limited to a part immediately under the skin; or it may extend along that portion of the tissue which penetrates between the organs and their different parts — This affection is sometimes trifling or of short duration, as in the transient Edema of the eyelid. Sometimes the whole cellular tissue is occupied by a transient watery infiltration, which results from a greater activity of the exhalents than of the absorbents — This however is trifling when compared to those formidable affections, which the physician is generally called to treat

In considering the pathology of dropsy it may be divided into four heads, founded upon the nature of its proximate cause— In the first the inflammation appears to be the result of an irritated state of the capillaries In the second upon a local or general plethora of the Vessels. In the third upon a great loss of blood and general enfeebled condition of the living solids and In the fourth upon some obstruction, or impediment to the free return of the blood or lymph. to the right side of the heart. These are important distinctions since it is only by a proper attention to them that our pathological indications can be correct and our therapeutics founded upon the undeviating basis of truth— They will at once convince us of the absurdity of the ultra pathologys both of the ancients & moderns; the former of whom refer'd every thing either to an irritated state of the fluids, or to a general laxity of the solids; while the latter with no greater plausibility discarding all such notions absurd have ascribed the whole mischief to inflammation or plethora. We have thought proper to avail ourselves of the opinions of both parties— and, while we do not ascribe the exclusive agency to either of these causes, we have subjoined some others which they for the most part overlooked

It is true that there is one variety of dropsy which cannot be referred to either of these causes — I allude to that form which presents itself in the form of Cysts or vesicles filled with a limpid fluid.

The ancients & even those of comparatively modern date do not appear to have had any distinct conception of dropsy arising from inflammation, or an excited state of the vessels. It is true we have occasional allusion to such an opinion advanced more in form of conjecture than positive assertion. A late German writer of considerable celebrity (Dr Propenziger) is the first who advanced this doctrine in any thing like an intelligible form. His observations certainly gave rise to some very useful modifications in practice — but like all other innovations they conducted their proselytes into the other extreme. Viz. that of treating all dropsies as inflammatory affections. The result of such practice is obvious — the atonic & other forms were treated indiscriminately with the lancet — so that the incalculable good which might have been realized by a proper attention to Dr G.'s Pathology, was fully counterbalanced by an improper extension of his principles. This fault is particularly applicable to Dr Ayre Author of a late valuable treatise on Dropsies

This gentleman has made inflammation the exclusive cause of dropsy, refusing a debility of the exhalents and absorbents or an obstruction of the vessels any power to produce this disease But notwithstanding the Doctor has fallen into this error. This Explanation of inflammatory dropsy is very satisfactory -
In those effusions which depend on irritation or inflammation, the vessels upon which the remote & exciting causes act appear to be in a peculiar condition. That this is the case we know from the character of the effused fluid, which is for the most part clear, limpid or straw-colored - sparingly mingled with the ordinary substances developed by an irritation or inflamed state of the vessels. In what then does this peculiar condition consist? Is it a higher or lower degree of excitement than that which gives rise to the formation of coagulable lymph pseudo membranes or pus &c. There appears to be several degrees of intensity in the process of inflammation, dependant on the peculiar condition of the vessels which are marked by the consequences, or new products to which they give rise, These distinctions are well marked, not only in inflammation, but, in many other diseases and are the result of a general law which presides over not only the healthy but likewise the diseased actions of the system. On the same principle we have

a species of irritation which disposes the vessels to pour out blood constituting a kind of Haemorrhagic diathesis, another which gives rise to an increased growth of a tissue or organ forming what may be called Hypertrophic irritation, — directly the reverse of this we have a condition which disposes the organ to waste away constituting a state of atrophy — All these conditions result from the operation of the same principle acting under different degrees of intensity. Thus in accordance with the same laws. The different degrees of inflammation will give rise to results equally numerous & diversified. Influenced by this conviction we shall divide the process of inflammation into three different degrees. The first or highest degree, gives rise (as a consequence) to suppuration or the formation of pus; the second to an effusion of coagulable lymph constituting that degree denominated adhesive inflammation which is instrumental not only in the reunion of divided parts, but also in the formation of pseudo membranes — The third or inferior grade is attended with an effusion of serum and is that by which the infiltration in inflammatory dropsy is produced.

From these views of the subject it may be deduced that the Effusion of serous fluid which constitutes this variety of

dropsy, should be considered as the result of a peculiar excited state of the vessels of the cellular tissue which may be denominated Serous irritation or inflammation, in contradistinction to the suppurative, adhesive, &c. Many circumstances go to shew that this constitutes the lowest grade in the scale of inflammation. It seldom occurs except in those persons whose constitutions have been enfeebled by disease, or as a consequence of a diminished but imperfectly subdued state of inflammation. It is towards the close of diseases of excitement that this morbid action is most frequently developed. Thus Anasarca is frequently one of the sequela of Scarlatina Hydrothorax of Chronic Pleurisy Ascites of long continued inflammation of the peritoneum & Hydrocele of Chronic inflammation of the tunica vaginalis testis. All these may be converted into the adhesive or suppurative stages of inflammation, by exciting them to increased action - as in the radical cure of Hydrocele The effusion which follows this excited condition of the vessels differs from that which occurs under other circumstances - Dr. Blackall observed the urine of patients labouring under Chronic dropsy to coagulate by the application of heat or Nitric acid, while that of patients labouring under the Atonic form never does this depends upon its containing

a greater quantity of albumen

Dropsy has been observed to arise sometimes from either a general or local plethora of the vessels. When we reflect that all the fluids pumped up by the absorbents from the different parts of the body - are discharged into the venous system - we can readily conceive how a preternatural distention or general plethora may by impeding the ingress of these fluids produce general or local dropsy The veins are so distended with blood as to be incapable of receiving any more consequently, the contents of the lymphatics which in a natural state of the functions are poured into the venous circulation remain in those vessels. which being in like manner distended cannot absorb the fluids which are constantly poured out by the exhalents into the cellular tissue & great cavities of the body. The agency of this cause in the production of Dropsy has been very well illustrated by Haley. (for an account of his experiments see Van Swieten Vol 12 P 375)

The experiments of Magendie indicate in a very satisfactory manner, how a general plethora of the vessels may produce dropsy, by diminishing absorption. We found that when a considerable quantity of water was injected into the veins of an animal that poisons introduced into the cavity of the pleura did not produce their usual effects, until after the lapse of

a considerable period. But when this artificial plethora was removed the action of the poison was almost instantaneous. These Experiments are calculated to afford us much assistance in the application of our Therapeutical measures. They teach us how we may speedily and effectually remove accumulations of fluid by diminishing the plethora of the vessels

It would perhaps be difficult to account for the action of many of the causes which give rise to this excessive repletion one however of not unfrequent occurrence appears to be an enfeebled state of the heart or some embarrassment to the free play of the lungs. This prevents the ready passage of blood through the cavities of the Heart & consequently an impediment to the free return of the blood by the veins so that these vessels become distended with blood. The blood in the veins being thus retarded, the lymphatics become distended in consequence of their inability to discharge their contents into the veins the function of absorption is suspended & exhalation still going on dropsy is the consequence To this may be added the obstacle which is afforded to the passage of the blood from the arteries to the veins, by which a greater quantity of fluid is directed to the organic pores of the tissues and the activity of the exhalation increases in a proportionate degree

This condition is most frequently met with in weak convalescents who drink large quantities of cold water &c. Here a sudden influx of fluid is thrown upon the heart & Vessels which they enfeebled by the previous disease, and perhaps still more debilitated by the influence of the cold, are unable to propel with freedom and celerity.

A plethoric state of the veins is frequently produced from another cause. In old persons we frequently meet with an ossific state of the arteries which often proves instrumental in the production of dropsy. This disease is particularly apt to occur; if to the ossification of the arteries be joined a habit of indolence or want of bodily exercise. Here we have the operation of two causes which are very apt to bring on a general plethora of the Being. In the healthy state of the system, the circulation in the veins is for the most part sustained by the impulse of the heart, the contractility and elasticity of the arteries and the pressure produced by the action of the surrounding muscles. The first of these powers being in a great degree cut off by the ossification of the arteries - the second being deficient from the want of bodily exercise - we can readily conceive how a plethora would be likely to ensue. The pulse of the veins

arising from this cause may be considered as a very frequent cause of dropsy. Of the great number of dropsical subjects examined by Professor Geddings, he has found by far the greater number to have had either more or less ossification of the arteries or some organic lesion of the heart.

The next form of dropsy which we have to consider is that which arises from a great loss of blood, or a general enfeebled condition of the living solids and irritated state of the fluids but this last, like the dropsy its self should be regarded as an effect of the pre-existing derangement of the solids. This form of dropsy is most frequently met with in persons whose constitutions have been worn down by disease or their energies wasted by previous habits of dissipation. It often follows Chlorosis Diabetes Phthisis and most other diseases which gradually undermine the constitution and break up all its healthy energies. We frequently find this form of disease in those poor and indigent persons who inhabit confined and filthy situations — deprived of even the most common necessaries of subsistence. To this class we may also refer those cases of dropsy which follow great loses of blood, whither drawn by the lancet or poured out by Hæmorrhage. In this case the fluids appear to be equally implicated with the solids, and

in some cases the blood is so thin and impoverished as scarcely to stain linen — Dr Armstrong compared its color to that of Claret what is still more remarkable is that this disease is attended with a full and bounding pulse — Professor Geddings relates a case of this kind in which he had recourse to the lancet — "The arteries at the wrist were full, voluminous & bounding, the pulsations of the carotids were violent, and indeed there was throughout the whole arterial system, that general commotion which characterizes an highly inflamed state of the Vessels — on opening a vein a fluid issued forth which was as thin as water and merely imparted to linen a slight purple stain." This is probably the form which was known to the ancients, and which misled them so far as to regard all cases of this disease as dependant on a general depraved state of the solids and fluids

The fourth or that form of dropsy which results from some obstruction to the free return of the fluids to the right side of the heart is that which occurs most frequently and which presents itself in the greatest state of complication. In considering this form of disease, the obstructing causes may be divided under two classes. First into those which depend upon some disease of the Veins or Thoracic duct

and the second dependant upon disease in some of the parts situated in the vicinity of these — as enlargements of the liver & Spleen, the development of tumours &c Under the latter head may be classed some organic lesion of the heart or lungs, which by obstructing the free passage of the blood, prevents the Cavæ from emptying their contents and thereby gives rise to dropsy. That obstruction of the thoracic duct, from whatever cause produced can produce effusion has been proved by actual experiment. The celebrated Lower long ago made some conclusive experiments on this subject, which can be seen by referring to his De Corda Cap II p 123 ——

The first class of causes or those which implicate the veins or lymphatics themselves are much less frequently instrumental in the formation of this disease than the second class, or those which are situated in the surrounding parts — If however we include under this head organic lesions of the heart, polypi and other excrescences of its cavities and orifices, they should be regarded as frequently exercising an important part in the production of this disease. It is in consequence of this that we generally find Edema of the lower extremities and effusions of the chest in those lesions of the heart which materially derange its functions The Polypi may be situated in the great vessels as the Cavæ the Pulmonary

artery &c or these vessels may be partially or completely obliterated from other causes. We may now pass on to the consideration of the second head or those causes which are situated in the surrounding parts. To conceive how these vessels may become obstructed by the surrounding parts, it will only be necessary to consider their relation with the several viscera of the thorax and abdomen. We find the inferior cava embedded in the midst of the mesenteric glands, thence running over these and through the thick border of the liver. The iliac veins are exposed to the pressure of the gravid uterus, the encroachment of tumours developed in their vicinity &c, The splenic and mesenteric veins are exposed to pressure from an enlarged state of the spleen, mesentery, omentum &c The superior cava liable to be pressed on by diseased Larynx &c so that these things considered and the liability of these organs to take on diseased action - besides the injury likely to arise from the casual development of tumors in the vicinity of the different veins, we cannot be surprized at the great number of obstinate and incurable cases of this disease which are met with in practice. The Thoracic duct is subject to obstructions of the same kind producing not only General dropsy, but also a complete marasmus from the inability of the chyle to pass

into the circulation. Dropsy may not only be produced by a simple obstruction of the thoracic duct. but by a rupture of its parietes In a case of this description the chyle is effused into the cavity of the thorax - Mauro mentions a case of this sort. He also found that when he tied the Thoracic duct of animals some part of this vessel or the receptaculum Chylae was ruptured - The same thing occured to Sir Everard Home so that we are induced to believe that where any considerable obstacle is opposed to the passage of the chyle. a rupture of some part of this duct will follow - Having proceeded thus far in the consideration of this disease we shall sum up the usual appearances presented by the effused fluid.

The Water of this disease is usually citron Coloured & slightly unctious to the feel, frequently exhaling a slightly urinous odour - It varies considerably according to the characters of the disease and other circumstances, it is sometimes thin & watery and will not coagulate by the application of heat - in other cases it is thin and ropy and contains abundance of albumen - It is sometimes yellow, orange, Green or even black colored. interspersed with albuminous flocculi (This is probably owing to a complication of the serous with the adhesive inflammation) sometimes with blood. It some times resembles the white of eggs in its appearance - As regards taste, the Celibrated

Frank found it bitter in a patient that came under his care and mentions a case in which one of his friends found it sweet in a woman attacked with ascitis. In some instances it is perfectly black and very offensive. It sometimes has a milky and even an oily appearance, and occasionally has been found to contain so much soda, that the addition of a small quantity of sulphuric acid was sufficient to form Glauber salts. The predominent ingredient however is albumen the quantity of which varies according to the form of the disease.

The fluid is thought by some to possess acrid properties which disorganize the parts with which they are in contact. It is doubtful whether this can be the case, except when more or less disorganization has taken place. The Celibrated Frank says "Nous avons vue pratiquer la ponction sur sixcents malades, dans le cours de notre pratique; jamais nous n'avons reconnu dans les eaux le moindre caractere de fetidité ni d'acrimonie, quoique nous les eussions soupçonnées de quelque alteration" (We find however many contrary observations) He confined the fluid drawn from the abdomen of a man for a whole year in a well stopped bottle at the end of which time it did not manifest the slightest corruption.

If the disease be dependant on more or less inflammation of the

peritoneum or some other organ and the inflammation be attended with ulceration abscess Gangrene &c the fluid will be found more or less offensive according to the extent of the mischief.

It will now be well to consider those parts of the cellular tissue in which the effusion is most frequently seated it may be seated in the whole tissue, but those parts which contain little or no adipose matter such as the eyelid scrotum &c appear to be more predisposed to it than any other. These parts are sometimes affected with local Edema when the other portions of the cellular tissue present no indications of disease. The ankles are in like manner subject to effusions but they appear to be the mere result of gravitation rather than of any particular disposition in the parts to pour out fluids. Anasarca will sometimes attack the whole of one side of the body without the other being at all involved. Baron Dorrey mentions a case of this kind ——

Having premised so much on the nature and causes of Anasarca. it remains now to point out the most successful plan of treatment. This however is no easy task. When we consider the different varities under which this disease presents itself, we shall find that no one particular course of treatment will be found applicable in two cases – as it would not only exceed the bounds of a thesis – but also exceed our limited knowledge of the subject – to detail the plan of treatment proper for each particular form only we shall give those plans of treatment which appear most likely to succeed.

The treatment may be divided under three heads first to check the effusion second to procure the removal of the effused fluid and third to prevent its return. We may again divide it into the treatment which is proper in the Inflammatory form and the treatment proper for that form which arises from or is dependant on debility. First of the Inflammatory form. As the effusion is influenced by the general laws of irritation. it follows that our remidies to prove successful must be directed upon the same principle as in that form of morbid action. One of the first remedies therefor that presents itself is blood letting. This remedy was employed by Aretius and (Professor Potter says) by Hippocrates. However it was not much employed until

after the publication of Dr Gregory's book (about thirty years ago) since that period physicians have employed it with considerable success. But in resorting to this operation great caution is necessary inasmuch as we may by an improper use of it, prostrate the energies of the system below the point of recovery. When the disease takes place in a strong individual the course is clear but if the patient be debilitated by previous disease, climate age or other causes, it will generally be preferable to trust to low diet assisted by other less powerful antiphlogistic measures. If ~~bowels~~ blood be drawn at all in such cases it should be by cups and leeches. When however the lancet can be used, it is an important remedy, serving not only to check the effusion but also to promote the absorption of the effused fluid as has been shown by the experiment of Magendie, already mentioned.

As conducive to the same end with blood letting in the management of this disease we may prescribe those remedies which act by virtue of their contra stimulant and diuretic properties. For this purpose we may prescribe Tart Antimony in combination with Nitrate of Potass. — They should be given in as large quantities as the stomach will bear largely diluted with barley water mucilage &c It has been recommended

by some respectable authorities to carry this practice to the extent of producing emesis— but we can derive all the beneficial influence of the medicine without submitting the patient to the distressing and even dangerous effects of its emetic properties— many other medicines which act in the same manner— are prescribed under the name of diuretics— The Nitre already mentioned possess great diuretic properties— but the most powerful remedy of this class is the Fox Glove (Digitalis Purpurea)— It can only be employed in the inflammatory forms of dropsy— and here it seems to act more in virtue of its sedative than— diuretic Qualities. In the practice of Dr Blackall, it has proved to be almost a sovereign remedy. He laid it down as an invariable rule to give it whenever there was coagulable urine. The best mode of administering it is in infusion. Its powers may be considerably increased by a combination with some other diuretic such as the Squill &c. Colchicum has been successfully employed. The Supertartrate of potash has been highly recommended by some authors. It not only exercises considerable action over the heart and arteries but also promotes the removal of the effused fluid, both by urine and stool. It should be given in dose of a half an ounce dissolved in a quart of water, to be taken

during the day. The Lexicographer Johnson was cured by this remedy. He used it in combination with fasting & prayer (Potter) Its use should be continued for a considerable time. The alkalis are occasionally employed with success. Great advantage will be derived from their employment in combination with some acid as the acetate of potassa. The squill is a very useful remedy in this disease. it may be given in substance Tinct or Vinegar the powdered root is the best. it may be given in combination with calomel and dovers powder ℞ Pulvis Scillae 2 grs / Calomel 2 / Pulvis Doveri 5 Take at night. I have seen this formula successfully used when there was slight visceral obstruction. The celebrated Frank of Vienna recommends a combination of Oxymel of Squill — Solap. and some neutral salt — He cured a patient with it whom disease had resisted all other forms of treatment. The Achyranthis repens (forty knot) a plant common to the maratime districts of Carolina & Georgia — growing in dry soils. along walls. fences. the edges of road sides &c in places much trodden — has been used with success. It may be given in decoction. ad libitum. At the same time that these remedies are used the patients diet should be strict. and he should be allowed to drink largely of some mild fluid as Common water Barley water &c

Purgatives are also very valuable remedies in the cure of this affection. They are useful not only in diminishing the action of the heart and arteries but also in promoting the evacuation of the water in virtue of this power of of increasing the secretion of the mucous membrane of the intestines. In ordinary cases the mild cathartics will be sufficient especially if they are of the saline kind, such as Sulphate of magnesia, Supr Tartrat of potasa &c In more obstinate cases, where it is desirable to effect a revulsive action from the cellular tissue to the mucous surface the more drastic cathartics may be resorted to — Jalap — & Cream Tart may be employed — repeated two or three times a week — according to the strenghth of the patient. Some physicians recommend more drastic articles — as, Scammony Gamboge Colocinth Elaterium Croton oil &c They may all occasionally be used with advantage — but I think they will seldom be required. Sudorifics are sometimes successfully employed. They are more particularly applicable to those cases which arise from suppressed perspiration. The most popular of these is the Pulvis Doveri. Warm bath is in like manner highly useful sometimes the bath may be impregnated with medicinal substances as the

Calamus aromaticus &c. They may be prescribed in all cases, attended with a dry and inactive skin — The cold bath is sometimes advantageously employed in some of the forms of this disease. The celebrated Frank mentions the case of a man, who; was cured by a cold bath holding in solution a pound of the acetate of lead. Immediately on coming out of the bath the patient commenced urinating freely and the dropsy disappeared without the use of any other remedy — Other cases are not wanting in which the cold bath has been equally successful. It is proper only in the inflammatory form & then should be prescribed with great caution

I come now to the treatment ~~of the treatment~~ of the asthenic variety or that variety of anasarca which depends on a debilitated state of the system. Our indications of cure will be first to promote the absorption of the effused fluid, which should be done by some of the stimulating articles of the diuretic class of these the dandilion will be one of the best, since it possesses considerable tonic along with its diuretic properties. It is highly recommended by Professor Potter

who has sun patients discharge gallons of water daily under the influence of this article with considerable increase of strength. The bark of the root of the common holly (Ilex opaca) is also recommended by the same respectable authority — and from the beneficial results which he has experienced in the cases in which he employs it — it should be considered as a remedy well worth the attention of every American physician — Oil of Juniper — the juniper berries have sometimes proved highly beneficial Pressure upon the affected parts, by means of bandages has been highly recommended by the late Professor Smith of Yale College. Frictions with the flesh brush or even with the hand have a tendency to promote the absorption of the effused fluid — should never be neglected Secondly to restore the strenght of the patient which should be done by Tonics — of these the Quinine will perhaps be the best — and by a proper attention to diet &c

much more could be written on this truly formidable disease — but I think I have already written as much as will suffice. "and what is writ is writ
would it were worthier!" "Finis

— An —

Inaugural Dissertation

On Asphyxia,

Submitted to the examination of

The Provost, Trustees, and Medical Faculty

— of the —

University of Maryland

— for the —

Degree of Doctor of Medicine

— by —

Sam.l W.m Pherson of The Dist: of Columbia.

1832.

Asphyxia.

There is no subject perhaps embraced within the wide range of Medical Science which has not at some period undergone a process of investigation conducted with more or less minuteness: but we have still to lament the fact that many — very many yet remain involved in an obscurity, the removal of which would tend greatly to the advancement and consequent usefulness of our art.

The causes which operate so as to retard its progress, are manifest to the most superficial observer, — so manifest indeed, that to go into any detail in order to point them out, would be an affair of supererogation — or rather incompatible with my present design. — The pride and vanity of those who occupy elevated stations have thrown difficulties in the way, and contributed to augment the errors of Science. — Individuals of extensive fame, glory in pretending to see deeper into the recesses of nature than nature herself ever intended: they imagine causes, construct theories and distort facts in order to give these fanciful creations

the sumblance of Truth. The celebrity of some of the greatest Genuses that ever adorned the profession of medicine is only to be found in the Libraries of the curious or remembered only by men of erudition.

Whilst the phenomena, the causes of which they pretended to unravel or elucidate, still continue to observe the same regularity — to move in the same beautiful succession, the clouds with which their inventive talents have surrounded them, will be found to have been dissipated with the fame which promulgated, and the authority which palmed them on the minds of their respective ages.

The susceptible character of Youth being easily impressed with the absurd notions or ~~ignorant~~ ingenious follies of their instructors, has been a fruitful source of error; those who possess strong judgments, uninfluenced either by passion or prejudice, decide for themselves; others having no firmness of character, yield passively to the current of authority, and are consequently rendered either the preservers or destroyers of their fellow men precisely as chance may have cast their destiny upon the wayward stream of Life.

The retiring and modest decide with caution and deliberation which entitles their opinions to respect; the arrogant & presuming are hasty and their are dangerous. Truth is an object precious to every upright and correct mind; Vanity, the wish to acquire an ascendency, or indolence may obscure or destroy it; judgment, zeal, and industry, in enforcing, maintaining, and promulgating are qualities which claim the respect as they deserve the gratitude of Mankind.

I might proceed in the enumeration of those circumstances which have operated thus to the detriment of our Science to an almost indefinate extent — the effect of superstition — the passions of physicians — the errors produced by one extreme inducing mankind to embrace the contrary — ignorance — interest — prejudice — errors arising out of the use of improper language &c &c, all conspiring to the same unhappy result. "The perfection of every science consists in the exact assignment of effects to their causes, and the expression of their operation in intelligible language. The process is simple and observation is the great means of its accomplishment."

To the many objects of medical investigation involved in
in obscurity, that which I have selected as the theme of
my disertation may be added to the number; but I do
not flatter myself that any observations of mine will tend
to its elucidation and shall therefore content myself with pur-
suing a beaten path, leaving it for others possessed of more talent
and ability to strike out a new one.

Asphyxia is a term which has been applied to all those
cases in which animation has is temporarily suspended,
from some violence inflicted upon the individual, giving rise
to an impediment in the function of respiration — such as drown-
ing, Strangulation or exposure to the effects of deleterious Gases.

It is not my purpose however to Rest exclusively in
view the probability of a subsequent reanimation, but shall
include under this general head all those investigations
which are connected with sudden death from whatever cause
arising. Independent of the pathological doctrines which it
immediately embraces, or to which it has a more remote influ-
ence, it is interesting to us as being one of the most frequent sub-
jects on which we are required to give testimony under circumstances
connected with judicial procedings.

It is also intitled to equal consideration as being closely allied to the more common objects of medical investigation.

That asphyxia cannot be considered as a disease is apparent, but it is a condition bearing a close affinity to it— which those sources from whence proceed life and death, are suddenly and violently invaded; the various species of sudden death being merely "the simplest cases and the best illustrations of those terminations of disease, which it is the object of the art of medicine to avert." To the fact that this subject is surrounded by so many difficulties — involving some of the most abstruse questions both in Physiology and Pathology, may be attributed the neglect which it has sustained from dogmatick writers of former times. —

Bichat, it seems was the first to place upon a scientific basis those inquiries which he, and others subsequently, have instituted with such unexampled success — but notwithstanding much has been done, there still remains ample field for investigation and research. — It is merely my purpose, however, in this instance, to offer a few remarks in relation to the general nature and causes of Asphyxia — the mode in which its causes operate — and thus deduce a rational mode of Cure

The causes of asphyxia operate either directly or indirectly
on the pulmonic structure in which it has its origin, and
may be produced either by a suspension of its mechanical
chemical or vital phenomena. When it proceeds from inj
ury of the thorax; — or when a strong force is exercised in com
pressing the chest and abdomen, or by a sudden accumu
lation of fluids into the cavity of the former, the mechanic
al phenomena of respiration are interrupted giving rise to a
partial oxygenation of the blood or a total suspension
of that process, and asphyxia is the result. —

When it arises from certain altered conditions of the atmo
sphere — such as extreme rarification, or total absence
of it as in a vacuum, or by artificial closure of the trachea
the oxygenation of the blood is rendered impossible, the chemical
phenomena of respiration cease and thus become its cause.

When the vital powers of the system generally
are prostrated — as by fever, cold, syncope or lightning &c
the oxygenation of the blood is prevented, and thus suspended
innervation is induced. —

The symptoms of asphyxia are slightly varied by their several causes; but they agree in their essential character – the change wrought in the organs immediately implicated, and essential to necessary to life – the lungs, the heart, and the brain.

In relation to the mode in which the cause of this disease, there exists a great diversity of opinions have been entertained – as for instance to a defect of air and apoplexy – to the stoppage of the circulation by pressure on the surface – infarction of the lungs &c &c. – The opinions however, in relation to the causes of death from submersion may be referred to cold, loss of circulation, to apoplexy and to defect of air. That death does not arise in this instance from cold, is evident from the fact that animals die sooner in warm water than when drowned in cold; further, the exposure for a long time to water of a low temperature is not incompatible with animal life, provided the process of respiration can be continued.

Cold may no doubt contribute to this end for when long applied it has a tendency to debilitate the System. Loss of circulation. – According to a celebrated author the pulse –

ceases between two and three minutes after submersion and
hen breathing is sustained, it continues with the other functions
n indefinate length of time; though the body be immersed in water
t is sufficiently apparent that the stoppage of the circulation
not the cause of drowning, but the effect. Apoplexy.—

There is certainly some ground afforded for this opinion,
s the fulness and slowness of the pulse observed a short time after
submersion; the paleness, or lividness of the face & gums—hem
rhages from the nose and ears of drowns; and sometimes a
turgescence of the vessels of the brain found on dissection.

But we are compel.d to reject this notion when we take
into consideration the fact, that there is no extravasation;
nd frequently there is no turgescence about the vessels of the
rain whatever; on the contrary, they are perfectly empty and
s death generally takes place in four minutes, sometimes
n two or three, or even in one minute, it is manifest that
t does not proceede from this cause. The natural form
f this disease sometimes continues for hours and frequently
or days with a full bounding pulse, and great distention
tion of the vessels of the head, without producing death.

Defect of air, or suffocation. — As it is a well established fact, that respiration is essential to life and that pulmonic may be kept up for a long time, provided this function be not interrupted, and as death is the immediate consequence of such interruption, it follows inevitably that suffocation is the cause. — I shall therefore proceede to the consideration of the function of respiration, as the place to begin of suspended animation; and shall first premise a few general remarks in relation to its healthy performance.

Mechanical Phenomina. — According to Keil the lungs receive three hundred cubic inches of atmospheric air and the thorax makes about ten respirations per minute; two Dary twenty seven or twenty eight. — According to the observations of Mr Colhoun, thirteen respirations were made in a minute, when the body was bent as in a sitting posture over a table, and the chest expanded itself with difficulty, when the back leaned against a chair, and the thorax has been nine respirations were performed. Respiration with regard to fulness and frequency is affected by the state of the mind, even, by attention to the experiment.

Mr Colhoun also found that in the morning after breakfast two respirations just a minute were sufficient for the space of one minute; during the second, three were necessary. The experiment was again repeated in the evening, and two respirations in the minute were found sufficient for the support of life and could be continued for three minutes; afterwards, three were required and even these produced some degree of fulness of the head. On a repetition of the same procedure he found that he could subsist with comparative ease on three respirations in a minute; these experiments continued for twelve minutes and the power of continuing them did not appear to diminish. He therefore concluded that a middle number of respirations, between three and thirteen, varying to circumstances would be about the natural standard.

This Gentn. forced air into the lungs with great violence, and emphysema of the neck and breast was the immediate result — it also arose on the surface of the organs and passed to the pericardium.

Atmospheric air is essential to all the varieties of animated beings as much as it has been proven that oxygen in a state of purity is unfavorable to plants & animals. In the latter oxygen produces convulsions, debility and death, notwithstanding the carbon may have been previously removed by living matter. It gives rise in the lungs to sensation of heat and at the same time great excitement; increase of muscular energy, fulness and frequency of the pulse and one instance is recorded when it arose to ninety, and in another to one hundred and twenty beats in a minute while sixty four was the natural number before the exhibition of the Gases.

According to the experiments of Sir H Davy this gas is respired breathing, though but a small portion of the oxygen had been consumed. There can be no doubt then, the atmosphere being diluted by Nitrogen is more favorable to animal life — + that oxygen is imperfect for resuscitation. The influence of habit has great effect on the power of animals to breath air already rendered impure by respiration.

Priestly found that those which had been accustomed to pure air, died sooner in impure air, than those which had been used to it. Idiosyncrasy is not without its influence, as the organs of the system have various degrees of strength in different individuals; one may recover from drowning after having been submersed for an hour — another dies irrecoverably after immersion but for one minute.

Any cause which has a tendency to debilitate the or strengthen the system or produces any change in the qualities of the atmosphere gives rise to a corresponding difficulty or freedom of breathing — and thus has considerable influence. It would appear therefore that to a healthy performance of function on the part of the lungs, the air should consist of a proper proportion of oxygen and nitrogen, have a due and not excessive degree of moisture and be freed from noxious vapours by ventilation. I has stated in the commencements of this dissertation that the different species of Asphyxia were essentially the same and I shall now attempt to prove this position by showing the effects of noxious gasses, suspension &c &c —.

It has been shewn that oxygen when pure is unfit for the purpose of life and therefore it is only necessary for me to make a few remarks in relation to the other gases. From the experiments of Davy and others it appears that animals die [illegible] in nitrous gas in the space of from one to five minutes; which corresponds pretty nearly to the effects of submersion, and appearances after death are very analogous to those from the latter cause. Exqual parts of Nit: oxide and hydrogen produced the same effects, and with the same appearances after death.— Nitrogen in union with the other gases — in short a great variety of gaseous combinations produce the same results.

Davy considers Carbonic acid gas as inseparable from the closure of the glottis; another circumstance in which it bears considerable resemblance to water in its effects; the limbs in death from the former do not generally grow stiff.— This sometimes happens in death from submersion. Suspension by the cord, also causes death by the exclusion of respirable air from the lungs.— Munro, hung a dog by the neck, in whose trachea an orifice was made below the place of pressure, and the animal lived: after the —

ypiration of three quarters of an hour the rope was removed
low the opening, so as to prevent the ingress of air, the animal
on died. Compression of the nerves of the neck could not act
s the cause otherwise the animal would have died in the first
stance. The symptoms felt on suspension, and described by
se who have recovered are analogous to those experienced from
mersion and the same post mortem appearances in both varieties
Sufficient has been said in order that the operation
f the causes of this disease, which arise from the mechanical
chemical functions of the lungs may be understood; leaving only
hose which arise from causes affecting the vital phenomena
f the system. Of these the first is cold. Animal heat is in
timately connected with life and is indispensably requisite
o the support of it. Mr. Calhoun performed some experiments,
which and found that the temperature of animals diminishes
in proportion as the distances from the heart increases; and
e corresponding ability in a part, to preserve its integrity against
he effects of this agent. Paley, also takes away the power of pre-
erving the temperature — a ligature on the artery a blood vessel or
nerve has the same effect. The symptoms which indicate ap
parent death from cold, are coldness and numbness of the extremities
loss of muscular power and insurmountable propensity to sleep, ending

in complete asphyxia, and if it should continue, in death;
the common appearances of which are insensibility, flexibility of the
limbs, with the jaws fixed & the teeth clenched and froth issuing from
the mouth. The operation could in producing death is easily traced in the symptoms already detailed: the stupefy &
comatose disposition which occurs on its first application proves
the weakness of the brain; the numbness, insensibility, and loss of voluntary motion show that the function of the nerves and muscles are also
debilitated and at length entirely suspended. The blood vessels also lose
their power and contribute to this effect. Cold then acts in inducing
death on the general powers of life — Thus then the animal dies
from the suspension of the mechanical and chemical functions, produced by the general diminution of the vital powers. Hunger
also operates by prostrating the powers of life. — The muscles concerned
in respiration are rendered unable to perform their office asphyxia
takes place and from the utter debility soon terminates in death. It
thus endeavoured to show that the various species of asphyxia resemble each
other in their origin from the lungs, and the formation of blood unfit
for the purposes of life. On viewing the causes of Asphyxia we find
that they are allied by close affinity, and that they often unite
in its formation.

An Inaugural Dissertation

on

Puerperal Peritonitis

submitted to the Provost, Trustees

and Medical Faculty of the

University of Maryland;

for the Degree of Doctor of Medicine

By

Edward D. Gazzam

of Pittsburgh

Pennsylvania.

The following essay is inscribed to the memory of a departed friend, Doctor John M Farlane, a young man of probity genius and generosity, who was ardently devoted to Medicine and Philanthropy, and fell an early victim to the severe exposures, and laborious exertions incident to the practice of his profession in a newly settled country—

Edward D Gazzam

Baltimore Febry 27th 1832 —

Of the numerous diseases which the physician is called to encounter, none perhaps is more calculated to deprive him of the firmness and self possession proper to his character, than the one proposed as the subject of this essay. In looking over authors who have written on puerperal peritonitis one cannot fail to be struck with the deep solicitude which its dreadful effects create in the minds of all who make this disease an object of particular observation and reflection. It is only

however in modern times that any of the affections connected with the pregnant and parturient states have received even a share of the attention and investigation which they so well merit, not only on account of the intrinsic interest which they possess for the pathological enquirer but also for account of their great & injurious influence on the happiness of individuals and on the welfare of families — Were the deplorable results of puerperal fever confined to the agonizing sufferings of an occasional victim — to her untimely death — to the lamentations of friends and the sorrows and loss of her bereaved family, in these alone sufficient should be found to stimulate to continued exertions to discover more

certain means for obviating the cause
of such woeful calamities. But the
disastrous influence of the disease
is not so rarely witnessed; & liability
to it is coextensive with the actions
of organs allotted to all the sex for the
perpetuation of the human race.

By breaking down the constitution
of the mother or by depriving her of
life, great and permanent evils are
in many cases entailed upon the
children and thus its more remote
consequences add not a little to its
importance. Children
can hardly be expected to attain the
full health and happiness which
generally result from constitutions
strengthened by a prosperous nurture of the
body in the morning of life, and from
minds influenced by proper early habits, if

the being who gived them birth is not preserved to them with health and unimpaired faculties during the helpless periods of infancy & childhood. If mothers are permanently deprived of these blessings, even though a lingering existence be allowed to them, the children in most cases must suffer materially, for those delicate offices which Nature requires for the well being of the human offspring can generally be fulfilled in the requisite perfection only by the unremitting assiduities of maternal tenderness.

Such reflections might present themselves if the disease occurred only in the sporadic form, but unfortunately it is well known to have frequently raged in Europe

as an epidemic and we have good reason to believe that even in our own country it has sometimes put on that character. Its malignity is at all times alarming but when it thus prevails its ravages become truly awful.

To the exceeding fatality heretofore attending its attacks we have ample testimony. Doctor Denman says that "it occasions the death of "much the greater part of those who "die in childbed," and other practitioners of equal respectability estimate its mortality quite as high, some of them declaring that "of those who have "been seized with puerperal peritonetis "three out of four have fallen "sacrifices to it." Nor is there room

to doubt this statement though it exhibits on the part of those who are seized a mortality far transcending that which marks the progress of Indian cholera, that tremendous pest which after traversing Asia and the North of Europe is now sweeping off the unhappy people of Great Britain, and threatens soon to ravage other more favoured regions of the civilized world. I say exceeding proportionably the mortality of Spasmodic Cholera for the latest accounts from Britain show — I believe that there, as well as on the continent, of those who are attacked by that disease more than one half recover, whereas of those whom puerperal fever assails three out of four die.

It must be acknowledged while it is regretted that puerperal fever though its claim to a remote antiquity is undeniable, holds even at the present day a conspicuous place among the opprobria medicorum. Yet if we consider how much the attention of the profession is now awakened to its importance, and also take into view the great truths in pathology which are fast being developed, with the important discoveries almost hourly taking place in our ~~remedial~~ means, we can hardly refuse the consoling belief that the time is at length drawing nigh when this fearful foe of helpless woman will be brought completely under the command~~ing influence~~ of science.

But as just intimated the
doubts which at present obscure the
pathology and treatment are numerous &
confounding, notwithstanding all the
learning and ingenuity which in more
modern days have been so liberally
bestowed on the subject. And if the
learned the skillful and the experienced
have met with such difficulties in
treating of this disease, how embarraping
must the task be to one of no exper-
-ience, and who besides being conscious
of a total inability to throw new
light upon the subject is even fearful
that the mere attempt to present some
of the ordinary views entertained of it
may involve him in difficulties
which better informed minds may

view as absurdities. But though let
it approached with the diffidence which
this consciousness of its difficulties & of
the writer's inadequacy naturally occasions,
yet the task having been commenced
must not now be resigned in despair.
Indeed I cannot choose another
subject if I would. Having got
under weigh entirely too late in the
season to permit any profitable
change the present course must at all
hazards be pursued. Though Charybdis
lie on the right hand, and Scylla should
appear on the left, the difficult passage
must be risked for an absolute necessity
now hurries onward, and to struggle against
irresistible currents were alike fruitless & unwise.

It is believed that the latest & best
authorities generally agree in considering
puerperal fever and inflammation of the peritoneum. Not

only do post mortem examinations
afford evidence of this, of the most imposing
kind, but the usual symptoms presented
during life also strengthen greatly this
view of the pathology, and indeed with
most medical men put all doubts
on the subject to rest. And as all
probably will acknowledge that the
phlogosed state of this membrane
is at least the most prominent
and unvarying feature of the disease
it perhaps will not (at least in the
present state of our knowledge) be
assuming too much if without further
argument we set this down as the
disease, and consider the accompanying
affections of the abdominal, thoracic, and
pelvic viscera, which are not unfrequently

met with, as merely the effects or at most only concomitants of the peritoneal inflammation.

It will not therefore be deemed necessary to review any of the various opinions formerly entertained of the pathology and which have been laid aside, or to give an arranged recital of the reasons which led to their rejection. A detail of what are now believed to be the most correct doctrines, with such facts & arguments in support of these views as may naturally present themselves, will necessarily render the objections to former and opposing opinions sufficiently obvious. A formal enumeration of them besides wasting time might tend

rather to obscure and embarrass than elucidate the subject.

In puerperal peritonitis the inflammation neither invariably pervades the whole membrane, nor is it confined with any regularity to a particular portion; for sometimes it invades the part lining the walls of the abdomen, or that covering the intestines and at another time, the mesocolon or the omentum. Again the peritoneal coat of the stomach or that of the liver may suffer & in fact the peritonitic envelope of every organ may be attacked in turn, or they may all suffer together. But though every part possesses this liability, it is not to be thence inferred that the susceptibility

of the several parts are altogether uniform and equal, for the reverse is on good grounds believed to be the fact. That portion of the membrane in particular which covers the bladder and the neck of the uterus will be found more frequently affected than any other part.

The affections of the parenchyma of the viscera which attend and are intimately connected with the disease, in most cases obviously result from a preceding inflammation of the peritoneum, though it must be admitted that among parturient women there are a few instances where an active inflammation of the intimate structure of the uterus or some other

viscera has preceded and given rise
to the inflammatory state of the serous
envelopes. But even in these cases, the
inflammation of the organ in which
the mischief commences is only
primary in respect to the order of
its occurrence, for when phlogosis
of the peritoneum supervenes this
tho' the secondary affection in regard
to time, assumes at once the more
important character, excites more
solicitude, and demands more prompt
attention while the first inflammation
considered only as a complication
of the peritoneal affection is to
receive merely the attention which its
present relations & connections with
the latter may require or admit.

The child bed fever as the disease under consideration is called by some authors, is usually ushered in by a general chill which is occasionally of extraordinary duration and severity. Not unfrequently however there is only a partial sensation of coldness which is confined to the feet and legs. But the duration and number of the precursory chills are alike variable - in many cases being long continued and frequently repeated, while in others, they are short and do not recur often. They are seldom entirely absent, though cases are not wanting to show that a chill is not an invariable symptom.

Simultaneously with the
rigors or soon after these set in, the
patient experiences a general soreness
or aching weariness of the limbs. The
skin becomes hot and dry, though it
is by no means uncommon to find
it even in the forming stage of the
malady, bedewed with a copious and
warm perspiration. There is generally
head-ache, and the pulse which is
mostly small and tense, becomes very
frequent, rapidly rising from a
hundred to a hundred and fifty
beats in a minute. This extraordinary
frequency of the pulse appearing at
the commencement of the attack, &
continuing almost constantly until

the patients sufferings terminate in convalescence or death, is, according to those authors whom I have had an opportunity of consulting, one of the most invariable of the symptoms. Professor Hall's experience however leads him to conclude that the pulse is a very uncertain index, and he also adduces other authorities of high respectability in support of this opinion. "Pulsus est signum fallacissimum" is the unequivocal expression used by one of these authorities. I cannot therefore undertake to say, that a pulse though indisputably of a remarkable and invariable frequency, but not possessed of other well marked characters, is a symptom on which much reliance should

be placed.

In the very commencement of an attack an inability to sit up in bed may be observed and in a little while a state of great debility ensues. The patient soon complains of wandering pains over the abdomen which generally appear to start from the hypogastric region or at least very early become conspicuous there:- from thence they soon extend into the iliac regions and shortly traverse the whole belly. In a little time the part in which the pain is most intense begins to swell and if pressed with a very moderate force, the patient's sufferings are immediately & excessively increased. Rigors of greater or less severity come on, & the pain in general

rapidly extends over the whole parietes of the belly: this becomes tumid and so intolerant of pressure as often to render it necessary to relieve the patient of even the weight of the bed clothes. Frequently severe pain is felt in the back and hips and sometimes in the legs.

The wretched sufferer can now lie only on her back with the body incurvated and the legs drawn up: this state does not continue long before vomiting comes on, though not unfrequently this is an earlier symptom. A yellow bitter matter is usually ejected, but sometimes the gastric disturbance amounts only to a distressing nausea, or

perhaps a few ntchings. The secretion of milk is suppressed or if it has already taken place it is mostly soon arrested: sometimes however it is only diminished in quantity and altered in taste and appearance. The entire want of this secretion where the disease occurs very early in the puerperal period, or its alteration, diminution, or arrestation after the breasts have begun to perform their customary office, are also among the most regularly constant attendants on puerperal peritonitis. A sensation of great heat is another prominent symptom and this on some occasions is dry and burning, but at other times while suffering

much from heat the patient will perspire copiously.

After the pains have extended over the abdomen they become at intervals so excessive as to force the patient to evince her agony by deep groans or piercing shrieks; and often paroxisms of increased suffering are excited by the lightest pressure on the belly or the slightest movement of the body. Soon after the occurrence of pain the swelling with tension & tympanitis appears and the developement of these follows pretty much in the order in which the pain appeard. Thus where pain is first felt in in the hypogastrium, in that region

the swelling may be first observed, and and if the pain had next traversed the right iliac region, this, next after the hypogastrium, will be the first to swell: but these painful tumefactions will not unfrequently exist in the parts where they first appear, for sometime before any other part becomes tumid or painful. It should be observed that tension is usually present only when the swelling has been sudden, and that when the belly swells slowly the tumour assumes rather a puffy than a tense character. The swelling is sometimes occasioned by the effusion of serum into the cavity of the peritoneum, often by the evolution of gas there or

the generation of gaseous fluids in the intestines, though in some instances no doubt all these causes combine to enlarge the abdomen whose distention proves much more harassing in this disorder than in any other. During gestation and parturition the abdominal parietes have of course endured great distentions which besides enhancing their sensibility have also rendered them flaccid and on that account less able to resist the pressure of the serum or the expansive force of the gas.

Though the division of puerperal fever into two stages only, seems not sufficiently critical, yet the attempt made by some late authorities to

establish the existence of three distinct stages is hardly more satisfactory. The want of success attending these laudable efforts to trace exactly the successive steps of the disease, and to developpe more satisfactorily its character by accurately marking the boundaries of its several stages is owing no doubt rather to the inherent intricacies and obscurities of the subject than to any want of attention or acumen on the part of the learned & ingenious enquirers who have made it an object of study and tried though in vain to seize its shadowy & protean forms. The symptoms of one stage are too intimately blended with those of another, and the lines of demarcation too

indistinct to be always discerned by
even the most skillful and acute.
No settled preference then can be given
to either mode of considering the
subject, but perhaps it may serve
a better purpose to adopt for the
present the more recent view. There
seems at least some authority to
justify us in this, and possibly it
may contribute in some measure to
a better understanding of the disease.

In following therefore those
who contend for three stages we may
consider that period as marking
the commencement of the second
stage when some of the early symptoms
appear to decline while others become
more formidable. Thus the pulse may

be lessened somewhat in volume and perhaps in force, but its frequency is increased. The swelling of the belly is progressive, but the tenderness diminishes, and the pain before acute becomes more obtuse. The respiration is more frequent and grows laborious. Entire constipation supervenes and the urine assumes a deep color, is scanty and of a very disagreeable odour. The lochia either cease suddenly or are diminished much in quantity presenting a dark and offensive aspect. This stage which can last only a short time, ten or twelve hours at most, has been considered by some practitioners as a kind of neutral ground where the physician

should beat a parley, & make a truce
with the disease, and suspend all
active operations; or in other words
where the depletory and antiphlogistic
practice recommended in the beginning
of the attack, and the stimulating and
tonic mode of treatment considered
so essential in the last stage, would
prove alike pernicious. Doctor Dewees
whose experience and general
correctness are well known says in
express terms that "an intermediate
"state or stage does take place in
"puerperal fever between the expiration
"of the inflammatory stage and the
"period of effusion" and that at
this period "blood letting can do
"no good & stimulants must do harm".

Besides the symptoms just enumerated as those of the second stage, the following taken as a group may be considered as belonging to it, though some occasionally present themselves at an earlier period and others unquestionably are met with sometimes in the third or last stage.

The irritability of the stomach is greatly increased, vomitings almost always supervene if they have not before occurred, and if they have taken place before, are now much more violent and frequent. The swelling, if not heretofore tympanitic, now becomes so, and the cheeks and lips grow livid.

In many cases the tongue is protruded with reluctance & withdrawn with difficulty, and is frequently dry and rough: at other times it is heavily coated or it may be clear & red particularly along the edges. It is well however to remark that in the several stages of puerperal fever this organ presents very various appearances and little reliance can be placed on any of them as diagnostics, but we should be aware that such and such conditions of the tongue may exist. In the stage of which we are now speaking the mind is often in some degree deranged: the memory in particular is apt to be affected, and it is not

uncommon for the patient to forget occurrences which took place only a moment previous. But besides this forgetfulness and the vague and contradictory answers which she gives to all enquiries, the general expression of the countenance affords sufficient evidence of the tendency to delirium, and in other respects is an excellent sign of the disease. However uncertain as criteria the appearances of the tongue may be, the reverse seems to hold in regard to the expressions of the countenance for experienced practitioners who have studied the physiognomy of disease find in general little difficulty in recognizing the cast of countenance peculiar to

peritoneal inflammation, though they acknowledge that it is not easy to convey in words an adequate idea of it. The features are said to be drawn up presenting an aspect strongly indicative of intense bodily sufferings and, at the same time if the intellect acts in any coherent order, they plainly evince the strong apprehensions of her ultimate fate which the patient generally entertains. On approaching the bed side a remarkable and very disagreeable effluvium will also be observed; but of its particular character no description can give any satisfactory notion: it is strictly an odour sui generis; to be known it

must be learned by the organs of smell and once perceived by them can never be forgotten.

Of the third and last stage which is one of utter hopelessness little need be said: either effusion gangrene or suppuration, or perhaps all three have now taken place: the hands sometimes look as if held for a good while in warm water, their skin being shrivelled up. The face & extremities are not unfrequently bathed in a cold sweat which occasionally extends over the whole body. The pulse flutters and there is chilliness without reaction. discharges from the uterus of a black & grumous aspect, involuntary dejections,

delirium convulsions & death.

The treatment still remains to be considered. Unfortunately the opinions of medical men respecting this important point are exceedingly various and discrepant, and as the writer has no experience of his own to appeal to, the views here taken cannot be urged as opinions adopted on conviction, confirmed by observation, and to be tenaciously adhered to, but merely as the doubts & suggestions which have presented themselves on a very imperfect and necessarily hurried review of the subject.

The tonic and stimulant plan formerly pursued in the first stage was founded on the

belief of a septic tendency from the commencement of the disease and on the idea of a debility which it was of the first importance to counteract without delay, but this treatment though once supported by the authority of great names is now laid aside so entirely that its consideration may be dismissed without ceremony. Bloodletting and purgatives the most potent remedies now in use, have both been carried to a great extent, and both are worthy of a careful and impartial consideration, but the claims of the former to great curative powers being established as it is believed beyond dispute, it seems to require here only a passing notice, while the more

doubtful reputation of the latter calls for a more thorough investigation.

The extent to which blood-letting is now generally carried in puerperal peritonitis seems fully warranted not only by the rapidity of the disease and the violent & high inflammatory action which always exists in the first stage, but also by the salutary results which in general so obviously flow from this practice.

In no other acute inflammation are the advantages resulting from a free use of the lancet more conspicuously illustrated, and if sanguine depletions were now exclusively relied upon, [redacted] or if the supposed benefits derived from equal boldness in the

actually existed, and
use of purgatives, corresponded in
any degree with the undoubted good
effects of copious bloodletting, this
fearful malady, would be perhaps
deprived of half its terror and more
than half its danger.

We should always in the
first instance adopt general
bloodletting and afterwards vigorously
pursue the disease by the application
of leeches in every part of the abdomen
to which the pain may be translated.
In the number of these we ought
not to be stinted for often fifty &
sometimes a hundred may be
applied with evident and great
advantage. But in urging such liberal

topical depletion it is not intended
by any means to propose it as
a substitute in any case for venesection, but only
as an adjuvant; nor is it to be
inferred that we ought in general to sheathe
the lancet as soon as the leeches
are called into service. On the
contrary it seems to me that the
correctness of repeated and profuse depletions
by general bloodletting as recommended
by the opponents of Mr Broussais has
been most clearly and satisfactorily
demonstrated. But while I would
without hesitancy go as far in that
course as he who goes the farthest.
I am strongly impressed with the
belief that Mr Broussais objections to

purgation in this disease, remain unconsured and are indeed too well founded ever to be refuted. I should therefore feel bound to act in accordance with his views in this particular until at least experience the test of all theoretical opinions shall more clearly prove them to be erroneous, adopting however at the same time the sanguinary doctrines of his opponents.

Purgatives says this gentleman are injurious "because the vermicular "contractions which they excite in the "intestines must increase the morbid "sensibility of the peritoneum." Of the numerous but inconclusive arguments raised against this position, the

the observations of Doctor James Johnson
have been urged as frequently and as
strenuously perhaps as any others, and
seem indeed to be entitled to as
much if not more weight than any
on that side of the question. The doctor
says "when the portion of peritoneum
"reflected over the intestines is inflamed
"and the villous coat is unaffected
"I hesitate not to assert from personal
"experience that constipation of the
"bowels will in nine cases out of
"ten be a feature of the disease; and
"in such cases we maintain that to
"excite the natural action of the
"mucous membrane immediately
"after proper vascular depletions is

"a powerful mean of checking the
"peritoneal inflammation; in the same
"way that a free expectoration from
"the mucous membrane of the lungs
"relieves the vascular turgescence and
"inflammation of the parenchymatous
"structure or pleural covering of the
"same organ." Plausible as this
reasoning is, and though it may seem
even forcible if not conclusive at the
first blush, yet on a little consideration
it will be found perhaps more specious
than solid. It is to be observed in
the first place, that "proper vascular
depletions" which even in the view of
Doctor Johnson must precede the use
of purgatives is a very indefinite

expression meaning one thing in the
view of one practitioner, while in the
estimation of another it signified
something almost entirely different. And
it may be remarked also with regard
to the illustration drawn from the relief
of vascular turgescence afforded by a free
expectoration from the mucous membrane
of the lungs that this may be admitted
as an undeniable fact, which it
certainly is, without yielding a tittle
in favour of the Doctor's opinion;
for it does not it is conceived reach
the mooted point. Had the propriety
of employing irritating remedies to
force the pulmonic mucous membrane
to this free secretion been shown, then

the argument would have such weight
as its analogical character might
fairly entitle it to, but as the naked
fact that free expectoration relieves
vascular turgescence in the lungs, does
not prove that in a violent inflammation
of those organs or their membranes we
should be justified in using irritants,
such for instance as stimulating
inhalations, for the purpose of effecting
this beneficial expectoration, it cannot
certainly be considered as bearing very
strongly on the question before us.

No one doubts that purgatives
often excite to more abundant secretion
"the secerning vessels of the intestines and
"of the glandular organs whose ducts open

"into them," but does this establish that the local depletion thus produced will counterbalance the additional irritation communicated to the peritoneum by the agitation ~~caused~~ which the purgative action creates in the bowels, and does it demonstrate that it is sufficient also to subdue the preexistent inflammation.

It seems to me that we might as well apply blisters to the thorax in the early stage of pleuritis, or make stimulating inhalations our first prescription in a case of active pneumonia, as to use drastic or cathartic medicines in puerperal peritonitis. That epispastics deplete locally no one will dispute, and it cannot be denied that by breathing a

medicated atmosphere increased secretions
from the bronchial mucous membrane
may be produced, yet who in the
present day would think to attempt to
carry by storm inflammatory affections
of the pleura or lungs? And shall
we then in peritonitis alone, endeavour
to overwhelm an acute inflammation
by means of irritants & stimulants
when bloodletting and other useful &
safe antiphlogistics are at command.

When an inflammation of
the pleural lining of the diaphragm
compels the patient to limit respiration
and carry on the function for a
time by employing only the superior
portion of the pulmonary apparatus
no one thinks of denying to the

irritated part the rest which it
so much needs and which a wise
instinct invariably strives to afford:
so in other forms of pleuritis— so
in wounds and particularly in those
of the abdomen. Nature by suspending
for as long a time and as completely
as may be compatible with the
preservation of life the functions of
suffering parts, affords them a
remission from ordinary but now
harassing duties and in this way
enables them to set up and carry
on the several processes necessary for
their restoration. We should
probably, as this truth is in most ordinary cases,
understood & respected, seek in vain
for a physician of ordinary intelligence

who would endeavour to force into full action the parts covered by an inflamed pleura, or for a surgeon who would venture to agitate and harass a wounded abdomen by irritating the intestinal tube with purgatives. The one admits the wisdom of Nature in relieving the affected pleura by suspending for a time the functions of the parts which are in the immediate neighborhood, and the other tells us that "Rest and position "are of immense consequence in the "treatment of inflammation. Whilst "an inflamed part is kept still the "restorative process goes on without "interruption, but when the part is in "motion it takes place very slowly

"owing to irritation, and in many
"instances is never accomplished."

But we are told that
"when that portion of the peritoneum
"reflected over the intestines is inflamed
"constipation of the bowels will in
"nine cases out of ten be a feature
"of the disease." Well if constipation
will come on, let it come — is it not
an almost unavoidable consequence
of the recuperative efforts of Nature? —
is it not the most obvious Effect
of her attempts to suspend temporarily
~~some of the functions~~ functions of the bowels, —
~~functions~~ which cannot now be exercised
without adding more or less to the
inflammation in the ~~superposed~~ peritoneum.

Are we sure that this torpid state of the bowels is not "in nine cases out of ten" rather a "feature" of the cure than of the disease. To afford the inflammation in the peritoneum a chance to subside the bowels not only should have rest but this should be obtained for them as speedily as possible. This necessarily involves some suspension of their functions which may be called <u>constipation</u> or what else you please, provided unnecessary alarm does not grow out of a mere name. If it can be shown that the temporary refusal of the intestines to deject their effete contents will necessarily be followed by <u>greater</u> evils than the disturbance in the plogosed membranes ~~inevitably~~ inevitably resulting from the exhibition

of purgatives, then must the propriety of
these remedies be admitted. Till then
however "constipation of the bowels" affords
no more cause nor indeed half as good
grounds of alarm as would the cry of
"constipation of the lungs" if that were
raised when those organs in consequence
of the inflamed state of adjacent membranes
refuse to throw off their usual quantum
of effete gases. The excretive functions
of the former has often been suspended
entirely for three or four weeks without
injury but that function in the latter
never ceased for an hour without
death ensuing. But grant that
constipation in puerperal peritonitis
is an evil of moment, still if it be

as it would appear one which in "nine cases out of ten" Nature deems necessary to enable the diseased structures to resume their normal conditions, its existence for a short time is not to be deprecated.

In behalf of the foregoing views I am happy in being able to avail myself of such good though it be only collateral support as is afforded by the sentiments which Doctor Potter expresses in his lectures in regard to the use of purgatives in bilious remittent fever. To me at least they seem to strengthen very considerably the argument against those remedies in puerperal fever. The Doctor says he is satisfied after repeated fair

experiments that where strong local inflammation attends bilious remittent fever, venesection without purging is much the better practice. In these cases he has bled three or four times in six or seven hours and refrained entirely from the use of purgatives with the most obvious and decided advantage and the Professor observes that it is only where congestions have taken place that calomel, or cathartics of that class need be used; bloodletting without purgation always sufficing where an active local inflammation exists.

If this holds good in remittent fevers, the practice would seem a fortiori to be correct in puerperal peritonitis, in

which a local inflammation exists
of much greater violence than any
that is likely to occur in the bilious remittent
After this local inflammation
is subdued by rest, absolute diet,
abstraction from light, from noise,
from company and every thing else
calculated to irritate; — after
the pain has been assuaged and
morbid irritability allayed by the
exhibition of opiates and other anodynes
~~in short~~ in short after we have
by these means relieved the patient
of peritonitis or very nearly so, then
if constipation continues it may
become proper to attempt its

removal by the use of such means as its greater or less obstinacy may render necessary, though it is believed that in most cases after the inflammation is fairly reduced castor oil or some aperient equally mild will suffice. In many cases however enemata may be used with advantage somewhat earlier.

Much might be said in favour of the opium practice in this disease but as it is time to close the consideration of the treatment I must be content to refer to a single remark of Dr Armstrong on this subject. That gentleman makes the following admission of

the good effects of opium in those cases
in which he was "compelled" to resort
to it. Doctor Armstrong's testimony
in behalf of this invaluable medicine
is entitled to additional weight from
the circumstance of its coming from
one who had previously acknowledged
himself strongly prejudiced against its
employment in this disease.

"I have been compelled" observes
"the Doctor from the necessity of attempting
"immediate relief to trust to opium
"merely when previous bleeding & purging
"had produced little or no alleviation of
"the symptoms, and in these, the efficacy
"of opium was so remarkably
"great as to embolden and justify
"me in giving it in similar

"cases when the ordinary measures
"in like manner had previously failed.

From what has been said
respecting the treatment it will be seen
that the following means are —
considered the most efficient in the
cure of puerperal fever, and with
this brief summary the modus medendi
may be dismissed. Copious bloodletting
both general and topical — anodynes
and narcotics — absolute diet and perfect
rest — rest to the mind and rest to
the body, and the latter not only in
regard to the apparatuses of voluntary
motion, but also in respect to the
inflamed membranes which from being
the principal seat of the disease, more particularly
require repose, and from being placed

beyond the control of the will, need on that account to be the more especially cared for by Nature & the Physician - The former will probably "in nine cases out of ten" do her part - and the latter should take good heed that he do not thwart her benevolent purposes.

It is deemed unnecessary even to enumerate the various secondary remedies commonly recommended, but respecting one of this class it may be well to mention a caution given by Doctor Baker which cannot be too seduously observed - The use of turpentine has been much extolled in Europe but the Doctor says that "if the article be used, at least

"in this country it should be only in
"the typhoid state of the disease". The
reason of this is obvious and will of
course apply equally well to a great
many medicines whose properties & effects
resemble those of turpentine.

Opinions have varied a good
deal with regard to the times at
which the patient is most apt to
be attacked, and also in respect to
the period after parturition within
which it is possible for the disease
to occur. It has been known to
commence even during labour, but
it is seldom that any symptoms
are observed for several hours after
delivery. ~~[illegible]~~. The most
usual period of accession is
probably from the second to the fourth

day. Sometimes however the attack does not come on for a week or two after the confinement; but the idea that the patient is liable to the disease for many months or even a year afterwards, though supported by some respectable authorities, seems to be not well founded. Long before this, the parts which were immediately concerned in labour and more particularly affected by it, will have resumed their usual forms and ordinary functions, and it may therefore be fairly presumed that the system is then free from that predisposition to puerperal fever which parturition alone can occasion. At so distant a period from the confinement the mere circumstance of

the peritoneum becoming inflamed does not warrant the presumption that a predisposition to the puerperal affection existed.

Still further removed from probability, seems the opinion that women who have had difficult labours are less liable to take the disease than those who have had speedy and easy accouchements. On this subject Doctor Potter well observes that "independent "of the presence of any cause producing "at the time a different disease, the "puerperal fever assumes a character "more or less inflammatory according "to the constitution of the subject and "the degree of injury inflicted by the

"puerperal process."

Among the complications attending this disease, that which is occasioned by a precedent inflammation of the uterus is correctly accounted one of the most dangerous. Its very peculiar danger is owing not only to the existence at the same time of acute phlogosis in two different structures, but also to the debilitated state of the system previously induced by a disorder of no ordinary magnitude. In these cases, besides using the remedies heretofore indicated, modified of course according to present circumstances, it may also be useful to apply leeches particularly to the parts adjacent

to the fundus uteri, and to the vulva, and to promote sometimes the depletion from those parts by the application of moist warmth to the fresh bites.

Here too, regard is to be had only to the Effects of the remedy and not to the absolute quantity of blood abstracted; for it is only by observing with care the state of the patient, that a rational judgment can be formed of the propriety or impropriety of repeating depletions of any kind. The physician should consider the strength of the patient and the strength of the disease as the only safe and standard measures.

From the extreme sensitiveness which parturition generally occasions,

moral caused at this time act with unusual force and when women are brought to bed who under even ordinary circumstances are acutely sensitive; there is danger of mental emotions giving rise to dangerous and fatal affections. Dr. Armstrong remarks that "an excess of sensibility "is always to be dreaded, for I have "had opportunities of observing that "those patients seldom recover who are "tremblingly alive to every surrounding "impression; and it is well known that "unmarried women do not recover from "puerperal peritonitis so well as married ones."

A case which I have heard Doctor Meigs of Philadelphia relate as having fallen under his notice about a year ago I may take the liberty of mentioning here as it illustrates in a peculiar manner the fact that peritonitis may be occasioned by mental

distress occurring in the puerperal
state - The Doctor was sent for in
haste on account of the sudden
illness of a young and respectable
married lady whom eighteen months
before he had safely delivered of
a healthy first child - On entering
the room he [redacted] observed the
lady to be in great pain & learned
upon enquiry that she was
probably in the sixth month of
utero gestation. Aware that she was
endowed with more than ordinary
sensitiveness he warned her with
all possible caution and delicacy
of the probability that she would not
give birth to a living child, endeavoring
at the same time and not without

apparent success to fortify her against the misfortune. The labour progressed without any alarming symptoms and terminated spontaneously. The infant contrary to the Doctors expectations showed signs of life, but the respiration was difficult and incomplete from the apparently insufficient development of the lungs. In about an hour the child died Owing to the defective respiration the face presented a livid and almost black appearance and the nurse was directed to remove the child from the room occupied by the mother and not to apprize her of the peculiar colour of its face.

The Doctor left his patient in a pretty favorable condition but on visiting her some six or eight hours after was startled by an angry and peremptory demand which she made of him to say what business brought him there. He replied in a soothing way that he came to see her because she was sick. to this she rejoined with a maniacal laugh that she needed no Doctors. and the next moment burst into tears and bewailed her fate. then again suddenly changing her manner she protested in violent & frantic tones that she was innocent! "What does she mean?" enquired the Doctor of the nurse. "Oh nothing uncommon

sir" was the reply "she has been going
"on just that way off and on ever
"since I showed her the baby".
From this response it was but too
evident that the patients phrensy
was owing to the horrid idea of being
charged with giving birth to a black
child - A thought so horrible could
not act on her acutely sensitive spirit
without casting reason from her seat -
For several hours every means
likely to calm the alarming mental
agitation were essayed in vain - At the
expiration of that period symptoms
of peritonitis began to appear and
the phrensy to subside - The advice &
attendance of Doctor Chapman

were requested and obtained

But notwithstanding the most
assiduous attention on the part of
both the experienced and skillful gentlemen
who now attended the patient; she
sunk in a few days under the
fatal effects of a violent peritoneal
inflammation.

An

Inaugural Dissertation

On Pneumonia Bilosa

Submitted to the Examination

of the Provost Profesors and Trustees

of the University Maryland

For the Degree of M D

By Presley Nelms

of Virginia

1832

Pneumonia Biliṣâ

Pneumonia Biliṣâ is a compound Affecktion produced by the ~~the~~ combined effects of Marsh Myasmata and a low a Temperature = It is called in the Southern and middle = States where it generally prvails in the Winter and Spring Bilious or thead = Pluysy = It has also been called Pneumonia Typhoides from and Erroneous opinion that it never assumes a more inflamiterry Charackter and is properly and Inflamation of the Lungs or Plura combined with a remitent = Fever = assumeing the whle varyety of grades of acktion from a High Tonick and Inflamiterry To the Typhus form

In the Eastern our Country this
agreeable to the opinion of (Profesor=
Potter this Disease is never distinctly
formed assumeing Nothos complication
of Catrrh or Some of jenus Synanche
South of the Potmack although
It is some times compleatly
evolved it is never so inflamitery
as it is along the Shoars of
Jersy Delaware and Maryland
The farther South it is more
Disposed to assume more of the
Typhoid Characktor= like the
ordinary Remittents of Sumer
it attacks adults more frequently
Than Chiaisaho are Seldom its
Subjects= the aged are verry Lyable
to be attacked by it= Woman
as thay are less exposed than men
Suffer Less and Negrose
according to the opinion of
Proffessor Potter are Seldom=

2d

re seldom if ever attacked with
this Disease = It cums on like
Intermitents Fever with a Kneing
and Soarness in the flesh local
pain in the joints Head arms
and Legs and Nausya Dysenteryck
Simtoms and Vomiting attended
with a pain in the Thorax =
Sometimes there are no premonitary
Simtoms and as in ordinary
Intermitents the Chill preceeds
followed by the hot Stage
Sometimes the Extremetyes are
exceedingly cold to the Touch
and then the pacient is dangerously
Ill = a fullness is felt in the
Liver some days previous to
Fever and the Viciated Secretion
Sometimes excites some pain
a Tenesmus and a Small Discharge
of Blood the sensation of pain
in the Extremetys preceeds the
Disease as frequently as the Bilios =
= Remitent

he Skin Exhibits varyous Shades
nd is frequently Tinged with
Bile Two or Thee Days previous
any Other Simtom = The Countenance
highly expressive of Charackter
f the Disease = In many Cases the
Face is flushed and a Sickly
mixture of red and yellow
nd upon a close examination
Betray the Disordered State
f the Liver according to the
opinion of (Profesor Potter)
an accute headach is the
most constant as well as the
most formidable Symtom
in the majority of cases and
Coeval with the reacktive State
of Fever the State of the Liver
may be Told from the Intensity
of the Headach = although a
Stupid Lythargick State of the
Brain may be observed in some
from the Commencement

the more distinct the headache
the more indistinct will be
found the affection of the
Lungs = It is equally Trew
that the Lungs are in some
The principal Seat of action
and that Death is the Consequence
of Effusion or Disorganisation =
in the Lungs = The redness of face
is usually in the Degree as
the violance of the fever and
Delerium verry frequently
occurs from the Commencement
To the Termination of the
Fever when it occurs ~~early~~ early
It is not a Bad Simtom
But in the advanced Stage
It is a Bad Simtom Inasmuch
as it indicates a Deeply local
affection that aught
To have been prevented
But which Canot now be relied

Diagnosis) The most important
Diagnostick Signs Between
Pleurisy and Peripneumony are those
obtained by percussion on the
Chest and presure on the
abdomen = In Peripneumony percussion
made with the fingers Brought
Together in a line produces and
obscure dull sound which is
Best estimated by Comparing
The sound so produced by
Percussion on the healthy side
of the Chest = In Pleurisy on
the contrary no difference
can be observed made on Both
Sides of the Thorax = In Peripneumony
if we press on the abdomen
so as to push up the Diaphragm
against the Lungs almost invariably
excites a cough great oppression
and a Sense of Suffocation whereas
in Pleurisy no such uneasyness
ensues from abdominal presure

then we find in the Same patient a
bear sound on the painfull side on
Percussion insensibility to Abdominal
smallness and rapidity and rapidity
of respiration = an increase of pain
in full respiration = particular
uneasyness on lying on the affected
side and lastly pain upon
presure on the intercostal
Spaces of the affected side
we have little reason to
Dout of the existance of abdominal
Pluretick inflamation =
Auscultation or the employment
of the Stethoscope has of late
years attracted a goodell
of attention as the means
of obtaining a correct Dyagnosis
in Pectoral Diseases =
Interesting information may
no dout be obtained in
this way) = =

But it requires much carfull
observation before a proper
Dyagnosis can be formed in this
way of Examining = Prognosis
= Copious Expectoration of a thick uniform
yellow matter Is among
the first and perhaps most
encouraging Simtoms =
indicative of a favourable
tim of the Disease = when
this timton accurs with
and increase flow of
Sedimentous urin an
gentle but general Dyafosis
we have good grounds for
predicting a favourable
Issue of the Disease = more so
If at the same time the
pain and opresion in the
Bret abate = an the Cough
is less Troublesome when
on the contrary the pain and =

pression becomes more generally
diffused throughout the
Thorax — When the Cough
is dry and attended with a
dark read liquid Sputa
when along with the Tense
of great anxiety and Suffication
the Countenance and Lips
Becum livid the pulse
Soft Iregular and Labouring
and Finally when convultion
Coma Supervenes — and a Tense
of coldness is felt in the
interior of the Body whilst
the Surface is very warm
the danger to be considered
is very great — a wrathing
respiration attended with
Lividity of the Countenance
and the Constant effort
of the patient to Bear the
Brest and raise the Brest
and Showlders from the Bed
are almost fatal Indications

The Inflammation of Lungs in
this Disease is a very unfavorable
circumstance — The prognosis
in this Disease is attended
with considerable uncertainty
Instances of unexpected
recovery very often occur
in this Disease — after the most
dangerous Symtoms have
made their appearance — and
on the other hand Death
sometimes speedily takes
place in cases apparently
of little danger — a
profuse and continued Perspiration
seldom to be found in
Pneumonia Bilosa although
it makes its appearance in
a cold clammy form in
the exhausted state of the
System and generally But
not invariably indicates
an unfavorable Termination

18.

-eatment) Bleeding in Pleurisy and
Peripneumony Bleeding is the
most important remedy
the extent to which it is to
be regulated by the pain and
the local affection and the
pulse = In Pleurisy we are compelled
to abstract more Blood than
in Peripneumony unless the
arterial action is sufficiently
lowered whether the Pleura
or the substance of the Lungs
are inflamed a sufficient
quantity of Blood should be
drawn to make an impression
on the disease = The Blood
in Pleurisy should be drawn
from a large orifice and it
is sometimes necessary to repeat
the Bleeding several times
in the course of 24 hours
Before the violence of the
symptoms are lowered = =

more caution is however nec=
esary in this Disease= here
however Bloodleting is indi=
cated in the commencemen=
of the Disease it is necessary
to proceed more cautiously
in the more advanced Stages=
Cathartics are next in imp=
tance to Bloodleting= in the
opinion of (Proffessor Potter)
If we were restricted to
one class of medicines it
would be wise to select
Cathartics among this class
of medicine Calomen Seems
to answer the indications
Better than any other remedy
The Best auxiliaries are Olium=
Ricini and the Nitrate Salts
The only safe rule to be
observed in the exhibition of Cathtick is in the Nature
of alvine Discharges= they
should be natural=

nettics are among our most valuable
remedeys the cerebral affecktion
ums to our its state to the State of
the Liver the unbounded Sympathetick
of the Stomach = ~~seems~~ an Emetick
is well adapted to and indication
of cure = Thay determin the fluids
more forcably to the surface
in thay increas the Discharge
from the Skin which is Deficient
all together absent = thay Emu=
lge the Biliary Ducks and ~~[illegible]~~
promote the opperations of
bathartickes = Blisters are
of very little use except in
cases where the pulminary Symtoms are
most prominent = if the
Liver is deeply concerned thay
promis very little good
thay will sometimes mitigate
the affecktion of the Lungs
But the Hepattick affecktion
will remain obstinate

An Inaugural Dissertation

on

Yellow Fever

Submitted to the Examination of

Roger B Taney Esqr Provost

The Trustees and Medical Faculty

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Robert P. Magruder of Maryland

March 7th 1832

To Robert C. Cumming M.D.
The following pages are dedicated by
his friend

R.P. Magruder

To Samuel Baker M. D.
Professor of Materia Medica,
in
The University of Maryland,

Whose splendid attainments in the various branches of
edical Science, as well as his integrity of character
nd private worth, render him the pride of that
ience; The following pages are respectfully dedicated,
a mark of respect for many favours received, by his
ient and well wisher The

Author

To

Nathaniel Potter M. D.
Professor of Theory and Practice
of
Medicine in the
University of Maryland

Dear Sir,

Permit me to inscribe to you, this Inaugural Dissertation, as a testimony of my high regard for your diversified acquirements in the science of Medicine, as well as, gratitude for your gentlemanly deportment toward me, since our acquaintance.

Your obedient
Servt,

Robt. P. Masruder

Introduction

is a pleasure for the man of science, to look back upon
es which are past, and a view the changes which
ve taken place in the medical world. To see the
hts which have for so long a period obscured
horizon of science, now dissipating before the light
more favoured times. It is to the modern Physician
t we are principally indebted for clearing away
rubbish, which encumbered those of former ages,
om the dogmas of the schools, prevented those im-
rovements in medicine which might then have
en place. This principle cannot more clearly
illustrated, than by Yellow Fever, of which
m about to treat. No disease has undergone
greater revolution in the minds of Physicians,
an this, with regard to its cause, pathology
d treatment. At one time so inefficient was
e practice pursued in the treatment of this
ver, that it might have been called an
probrium medicorum. Its ravages were truly
mentable, almost desolating whole countries, render-
g them scarcely habitable; but from the
provements of modern Physicians, it has be-
me nearly as tractable, as any disease with
ich we are acquainted.

Yellow Fever

e name of this fever, is derived from the yellowness
ich usually occurs in its latter stages; but is not
appropriate one, from the yellowness not being a
ant accompaniment.

For perspicuity in treating of this fever I shall
ide it into two varieties; the Inflammatory
d Congestive; treating of their symptoms sep-
rately. I shall then speak of their cause and
tly of their treatment.

Symptoms of the Inflammatory.

approach of this variety is generally announ-
d by a feeling of lassitude, heaviness of expres-
of appetite and slight headach, which is soon
lowed by the more violent symptoms of the disease.
metimes the disease comes on without these initial
mptoms; the patient is seized with a faintness
d giddiness of the head, with a slight degree
chilliness and horror, these feelings are
llowed immediately by a high fever, an
id and scorching heat of the skin, acute
in in the head and back, and a strong
ating of the carotids and temporal arteries;
face is flushed and turned, the eyes red
d protruding; great anxiety and oppression
felt at the precordia, a burning pain in
stomach and great sickness; with violent
chings in which bilious matter is brought

afterwards of a dark colour. There is extreme
ness with much sighing, the pulse is quick, frequent,
g and full; the urine is high coloured and in
ll quantity. These symptoms continually increase
vomiting becomes almost incessant in some instances
the anxiety excessive, and the restlessness such
there is continual tossing; the patient having
ease in any posture; little or no sleep, with
riuine in some cases. These symptoms generally
nue to the third day, but sometimes not longer
the first or even a few hours.
second stage begins with an abatement of
ny of the preceeding symptoms, often with a
itful appearance, of a general remission of the
r. The vomiting, headach and burning heat
tly abate; the pulse looses its strength and
ness; and in some instances falls to near its natu-
standard." Sometimes "says Dr Mosely "in this period
the disease, the symptoms are so mild, and
patient so tranquil, that the disease is supposed
be at an end, and all means neglected, until
storm appears, that succeeds this fatal
lm, arrayed in those dreadful forms, which
e characteristic of the concluding stage, and
mpletes the catastrophe" This interval however
ten extremely short, so that the disease passes ~~at~~
m the Inflammatory stage to the black vom-
ing. At all events, either a repetition of similar

ptoms soon take place, accompanied with marks
eatly diminished energy; or the patients sinks at
into a comatose state; only interupted by vomiting
dark coloured porraceous fluid. The stomach rejects
y thing, the thirst, which in some is excessive,
others is moderate; and the skin is moistened
to partial clammy sweats. The eyes which were
ow red and inflamed, now become tinged with
llow; and this yellowness begins to appear
und the mouth, continuing to increase until
diffuses itself over the whole skin; in many
is however it is entirely wanting. The last
mptoms are a deep coma, heavy respiration,
convulsive kind of sighing, a low and weak
lse, delirium, faultering speech, subsultus,
iting of a black matter, hemorhagis from
rious parts, coldness of the extremities &c.

The preceding symptoms, coresponds with the
al manner in which this disease progresses; many
tients however do not have all the symptoms above
scribed, it being milder in some cases than in
hers. A number of circumstances seem to influence
e severity of the attack, such as, mode of living
climated and non acclimated, concentration
the atmosphere &c.

Symptoms of the Congestive

is variety, differs from the preceding, in not having
e symptoms so fully developed; the cause acting

powerfully on the nervous system, as to prevent
tion from being established. The attack commences
eat prostration of strength, weakness of the extremities,
dly or cadaverous appearance of the countenance,
ly aspect of the eye; the tongue has a glazed
ow appearance, sometimes perfectly natural,
h denotes a great degree of congestion, pulse
weak and oppressed, sometimes indistinct; a
eral coldness of the surface or the heat is con-
trated in one spot; sluggishness of motion, the
ient appearing to care very little about his disease,
piration laborious; there is generally some tender-
s in the abdominal region, with costiveness; great
or of the liver, which is denoted by the aspect
the evacuations, which are of a clay colour.
e symptoms being suffered to go on, death soon
es the scene. So powerful is the action of the
ison in some cases, that the disease is termi-
ated in a few hours; but more generally
from twenty four to thirty six hours or even
wo or four days.

Cause

would be presumption in me, were I to go into
elaborate detail, to prove the origin of this
er - that it arises from vegitable decomposition
have not a doubt, from the concurrent tes-
mony upon the subject. What the essential
ature of this agent is, I am unable to

out. Much has been said and written upon this subject; but what has been the result? We are no nearer truth than we were fifty or a hundred years ago.

Is this fever contagious? This appears yet to be a settled point. Some Physicians contending that it is; others that it is not. From carefully examining the arguments adduced on both sides, I think the unprejudiced mind would incline to the latter opinion. Contagious diseases seem to follow a law which cannot be controverted. It is, an immunity from a second attack; while yellow fever may be taken repeatedly; besides the various accounts we have, of this fevers ravages in various parts of the world, where a well marked case has never presented itself, which proved incontestably, that it arose from contagion. If this disease is contagious, what is the reason that nurses do not take it, when attending persons who are labouring under the disease, after being removed from its source? These facts I think are sufficient, to prove the non contagious nature of this disease; a number of others could be mentioned; but it would be superfluous to enumerate them.

Treatment of Inflammatory Yellow Fever.

In this variety, bloodletting is our sheet anchor; arterial action must be reduced, and we have no means so suitable as this. To obtain its full advantages it must be resorted to, early in the disease, and in sufficient quantity. No attention should be paid to the quantity of blood drawn; but to its effects upon the system; it should be suffered to flow until the pulse is reduced or fainting supervene, and this should be repeated according to circumstances. It sometimes requires seven or eight bleedings before the inflammatory action is removed. The abstraction of blood, seems not only to reduce the Phlogistic condition of the system; but serves also to allay that excessive irritability of the stomach, which exists more or less in this disease. Dr. Rush states "That he paid no attention to the dissolved state of the blood when it happened on the first or second day of the disease; but continued to bleed whenever the pulse indicated it." Purgatives are also absolutely necessary, to carry off the acrid secretions which are poured into the alimentary canal. Calomel either alone or in combination with Jalap, and followed in four or five hours by a dose of Sulp. Magnes. Senna and Sulp. Magnesia and this should be repeated until free cathartic is produced. The bowels should now be kept open during the

le course of the disease. Cathartics seem to
ss considerable power in reducing inflammatory
tion, from the large quantity of fluid attracted
the alimentary canal and thrown off.
moderate the burning heat of the skin, cold
lusions are of inestimable utility, they are always
y refreshing to the patient, moderating thirst,
well as diminishing the heat of the surface.
Ladders filled with ice may be applied to the
ad, being useful to calm the delirium which some
nes occurs in the disease. Cold acidulous
inks should be freely used, nothing being so
ateful to the patient. Blisters have been recom-
ended and are useful; adjuvants when prop-
ly employed. When not so are very detrimental.
hey should never be employed where there is
uch arterial excitement prevailing.
netics have been highly recommended by some
Practitioners; but they have been justly condemn-
d by others, the irritability of the stomach and
r collateral organs, countermanding their employment.
ch is the irritability of the stomach, that anti-
monial diaphoretics of doubtful ~~Im~~ import.
Calomel, given so as to produce its constitutional
ffect, has been recommended by some [illegible]
ut the majority seem to be opposed to the practice,
thinking, that convalescence is retarded by it.
do not believe it is ever necessary to pursue

practice, in this form of the fever, as it may
managed in most instances by the remedies,
ave before mentioned. Indeed it is impossible
oduce Ptyalism, until the Inflammatory action
been somewhat subdued.
- diet of the patient should be strictly attended
ll stimulating articles of diet being contraindi-
ated. They should be of the mildest character;
ht farinaceous articles should be the ones employed.
is impossible for the Physician, to be successful
the treatment of disease, unless this part of
treatment is attended to.
the treatment, may be summed up in a few
ords, bloodletting, free purgation, cold affusions,
idulous drinks, free ventilation and low
it, forming the principal means to be resorted
...

Treatment of Congestive Yellow Fever.

this variety, so great is the prostration produced by
cause on the System, that bloodletting cannot
exercised to the same extent that it can in the
mer variety. In this, the blood should be taken
m a small orifice and in small quantity at a
e, the loss of a large quantity being detrimental
the patient. If the prostration under the use of
e Lancet, as it will in a majority of instances,
shows the necessity of its further application.

Rush says we must bleed until we raise the
e, and then bleed it down again.
Potter says, that where there is much congestion,
e blood is never sizy. Purgatives are also req-
ired; they are more necessary in this variety,
an in the Inflammatory. Larger doses of Calome
ould be administered, to unlock the liver.
is impossible to relieve this organ without the use of this
dicine in some cases. The bowels should be
ely acted upon, and kept in a soluble state
ring the disease. It is in this form of Yellow fever
t ~~xxxxx~~ Calomel, given so as to produce its specific
ression on the system, stands so preeminent.
Potter speaks decidedly in favour of this
actice, and I can say from the little experience
have had in the treatment of congestive diseases,
t it is the only one which will succeed in
any cases. Since I became a student of the
altimore Infirmary, I have seen a large number
cases of congestive bilious fever, (which is only
milder form of yellow fever) where this prac-
e has been pursued and with the most
heering results. Camphor, in union with Calomel,
s been used, which seemed to be a valuable ad-
ition. Blisters have been very much recommend-
d and are very useful adjuvants; they act by
using the energy of the nervous system, which
very much prostrated and consequently assist in

ging on reaction. Sinapisms are also to be
, their action being quicker than that of blisters
may be used where we cannot wait for the effects
listers. The diet of the patient should also be
ttended to; the stomach should not be overloa
with stimulating articles, which are not in the
-er of that organ to digest.
I am now pleased in reviewing all the most
minent features of this disease; the ideas,
ich I have advanced upon the subject, are
borrowed, it being impossible for a tyro in
dicine to advance any new ideas upon it.

An Inaugural Dissertation

On Cynanche Tonsillaris

Submitted to the Examination

Of the

Provost, Trustees, & Medical Faculty

Of the

University of Maryland

On the first day of April 1832

By

James H. Waters

Anne Arundel County

Maryland.

Cynanche Tonsillaris.

pathology of this disease, is an inflammation of the mucous membrane of fauces, affecting especially the tonsils, and from thence spreading, so as to occu in many instances, the palate, uvula, pharynx, and membrane lining the back of the nose, and is of a strictly phlegmonous character.

mptoms.— The febrile symptoms which attend Cynanche Tonsillaris are often urgen almost at all times more rapid than could have been anticipated from the ent of local disease, or the importance of the organ attacked. The pulsation of artery is often as high as 117 to to 120, and the tongue covered with a thick t of fur. Much febrile debility accompanies this disease, particularly where the lammation, in its appearance and progress, has the characters of Erysipelas, more n of phlegmon. The duration of the disease is various. Under ordinary circumst ces, it may be subdued by bringing about resolution in the course of a few days; t now and then, a great degree of debility continues, and the convalescence is protract for many weeks. Cynanche Tonsillaris generally commences with slight chills, ceeded by a high grade of febrile reaction, attended with an uneasy feeling the fauces, and more or less in this part on deglutition. In a few hours a pain felt and fixed about the region of the tonsils, and the act of swallowing becomes mo and more painful, until at last it is attended with extreme suffering, or altoge ther impossible. On giving the throat, an examination one or both tonsils are und very much swollen, and the whole surface of the fauces very red, and a

what turnefied. The tongue is swollen, white, and covered with a thick layer of
nsparent viscid mucous. The face is red and turnid; the carotids pulsate strong
; respiration is difficult, hearing obtuse; the pulse frequent, hard and full, and
voice is indistinct or whispering. In general, much more pain is experienc
d in swallowing liquids than soft, or pultaceous solids. The pain generally shoo
from the fauces into the ears, particularly on attempting to speak or swallow
nd the mouth is opened with great difficulty and pain. A very thick ropy
ucous commonly adheres to the inflamed parts, and produces a difficulty of respi
ation. The uvula and soft palate are, generaley, very much swollen; but the principal
ain, and difficulty of breathing arise from the turnefied tonsils; for when both are
flamed, they sometimes become so much enlarged as to come in contact with each
ther, confining the turnid uvula behind them, or preping it forwards into the mo
h. The outer part of the throat, in the region of the tonsils, is always somewhat
rnefied, and tender to the touch. In some instances, the tonsils are covered with
flakes of coagulable lymph, of a whitish colour, resembling superficial slo
ghs. Small excoriations or ulcerations occur on the inflamed tonsils occasi
nally. These ulcers arise from small yellowish pustules bursting and pouring
ut a lymph-like fluid which concretes into a whitish pseudo-membranous
ayer on the surface of the tonsil. This, after sometime separates, and exposes
bright red and very sensible surface or erosion, from which a purulent ma
ter is discharged. The inflammation in this affection terminates either in
esolution or suppuration, gangrene being an exceedingly rare occurrence.

w structure" says Dr Eberle," is inflammation more apt to terminate in an
ss than in the tonsils. Internal suppuration often occurs in a few days, notwith
nding the most active local and general antiphlogistic remedies. The quantity
matter discharged from a suppurated tonsil is seldom so abundant as to be
very perceptible in the sputa, a portion of it, no doubt, being commonly
allowed with the saliva. Cases happen, in which the abscess, instead of break
internally, is gradually enlarged, and extending outwards, points externally
der the angle of the jaw. A case is related by Dodonaeus, in which the
tient appeared near expiring, where speedy relief was obtained by an exter
e incision into the abscess, and the consequent discharge of a large quantity of
s. Frequent attacks of the disease are apt to produce permanent enlargeme
t and induration of the tonsils. In some instances the inflammation passes
wn into the larynx, an occurrence which always greatly increases the perilous-
ss of the affection. An observation is made by some authors, that sometimes
inflammation is confined to the oesophagus; then they observe no swelling appe
s in the fauces: Sometimes the tongue is so much swelled that it is protruded
m the mouth: The cavity of the oesophagus has been entirely obliterated, and
patient has starved to death: Sometimes pain has been so great that food
s been completely abstained from, and the patient has sunk under it. In
me cases the saliva flows in considerable quantities: The pain sometimes
tends even to the diaphragm, and spasms are the consequence, the pain of
allowing alone has this effect: the saliva which is secreted in great quan

ties produces an involuntary desire to swallow, and convulsions occur; this
pens more particularly during sleep, so that it becomes necessary to pre
the patient from sleeping long, lest the saliva accumulates in the thro
or to place him in such a position that it will flow from his mouth with
ility. When the saliva accumulates in the throat sickness is produced in the stom
, or that a person would suppose that the morbid accumulation was in the
ter organs, when it really was confined to the throat. When the inflammation
confined to the throat the patient feels the greatest difficulty in swallowin
when he lies upon his back; it then feels if something hard was going down into
stomach; and the fluid, on attempting to swallow, passes up into his
se or into the wind-pipe. The disease may spread into the stomach,
ugh this is a rare occurrence, or it may descend into the Trachea, whi
is also a rare occurrence; the pain on swallowing or breathing will
low whether it exists in the Trachea or oesophagus; the swelling of the
ances is much increased by the pressure upon the jugular veins, reta
ing the return of the venous blood, as well as by the increased arterial
ction, which sometimes runs so very high that the appearance of the
atient is often frightful; when the fever is great, and the tumefaction
nsiderable, it is said that the eyes are staring, red and protruded: the ton
ue livid, and thrust out of the mouth; the functions of the mind impaired,
om the brain being compressed by the great flow of blood to it; deli
ium and snoring also are symptoms: the external parts of the neck and
east are swollen and red.+

e for Potter observes, that when the tonsils are affected with considerable inflammation, it sometimes extends along the Eustachean tube to the ear producing ness. Sometimes the secretion in the Trachea is so tenacious, that it is spit with great difficulty, and here we must resort to the acids, or if there is not such inflammation an Emetic is the better of the two remedies. Cynanche Maligna is only a low grade of Cynanche Tonsillaris, cold being its remote cause. swelling sometimes commences in one gland, and extends to the other. Sometimes both of them have swelled to such a degree as to prohibit the patient respiration, and thus an end is put to the person afflicted.x

Diagnosis.— This disease is readily distinguished by the redness and swelling the internal fauces, by the difficulty of swallowing, and the attending fever. When the inflammation runs high, the swelling of the tonsils is sometimes so great as to impede deglutition altogether, and patients have suffered very severely, under such circumstances, from hunger and thirst. food or drink attempted to be swallowed are sometimes returned by the nose, and this is a certain symptom of very severe inflammation. In a great many cases, the tongue cannot be protruded without generating considerable pain; respiration is not very frequently affected.

Prognosis.— Cynanche Tonsillaris frequently terminates, when the inflammation is active, by suppuration in one or both tonsils. The rapidity with which pus forms in the loose texture of these organs is very remarkable, but occasionally six or seven days elapse before the inflamed and highly stretched

abscess gives way spontaneously. The matter of the abscess is fœtid and nause
. When the abscess commences discharging the pus it is always succeeded by
at, and instantaneous relief. When the inflammation instead of being of a vivid
colour, has an aspect inclining to purple, it is considered that it partakes
the nature of Erysipelas, and it will then generally be found to terminate by
erficial vesicles, and ulcers, of a white or grey colour, similar in their na
to aphthae. These often generate a great deal of alarm from their resem
nce to the sloughs of Cynanche Maligna, but they commonly go off in a few
s, and are productive of no other inconveniences. In some instances, the inflam
ation will neither advance nor recede; x and Dr. Gregory observes, in vain have
ttempted to determine on what this depends. It is most ordinary he says; in
sons of a scrofulous habit of body, and who from their aspect might be consid
as predisposed to Phthisis Pulmonalis. After the expiration of a fortnight or
e weeks, the disease will in such cases commonly give way, but occasionally a
manent enlargement of the tonsiæ remains. This I imagine, says he chiefly
urs in delicate young women. x It is contended by some authors, that this disease
attended with little or no danger, scarcely any fatal cases of it being on record.
is rendered severe by neglect; and danger sometimes may be apprehended from
tonsiles preying on the Glottis.

uses.— This disease is often hereditary, says Professor Potter, but whether it is
ly so in scrofulous parents, as has been contended by some Physicians, he is
t certain with regard to that point, but is of the opinion that such a thing may
cur.

ns persons who are in the vigour of life are the most liable to this disease,
also those of a plethoric habit. x Some individuals are more particularly predis
ed to this disease, or this variety of angina than others. This is especially obse
in persons who have already once or twice suffered with an attack of this dise
. The constitutional influence of Mercury, or ptyalism, appears to generate
increased aptitude to this affection; a strumous or scrofulous habit, also
pears to constitute a state of predisposition to the disease. x Dr Gregory
es that habit increases the disposition to this disease, so that some persons
dly ever pass twelve months without having an attack of it, and in them
is induced by very slight causes. This affection he also mentions of its
urring as symptomatic of Scarlatina and Small-pox, and it sometimes attends
asles, Lichen, Catarrh, and Cynanche Trachealis. It is occasioned also by the poi
n of Mercury and the venereal virus; but in all these cases there will be found
fficient in the aspect of the disease, or the concomitant symptoms, to prevent
ambiguity in the diagnosis. x This disease occurs especially in the spring and
utumn seasons, and in cold and variable climates. A warm and moist winter
most productive of this disease, so says Professor Potter. x The ordinary
exciting cause of this disease is cold and damp air, or cold applied in any man
r so as to give a sudden check to the perspiration. Standing long on cold
d wet ground, getting the feet wet, or from sitting in a partial current of
r, particularly if the system be previously overheated, are particularly apt to
e rise to the disease in those who are predisposed to it. It may also arise from

causes, such as irritation of from the cutting of one of the posterior teeth,
fumes of Arsenic, acrid substances swallowed or applied to the fauces.
atment.— There are a contrariety of opinions concerning the treatment of this
ase, while Cullen contends that a copious abstraction of blood is seldom
pary, × Gregory on the other hand asserts that an antiphlogistic plan of treat
nt is required in Cynanche Tonsillaris, but venesection, he says is seldom, if
r necessary. Leeches to the external fauces have been recommended, and
frequently very serviceable. If the inflammation run high, the tonsils,
more properly the velum pendulum palati, may be scarified, and a little
od so obtained affords a very effectual relief. In slighter cases it will be
fficient to rub the throat with some rubefacient liniment, as the Linimentum
mon; and to direct the frequent use of repellent gargles, as of the infusion of
es with a due proportion of the Tinct. Capsicum: ℞. Infus. Rosae ℥ix. Mel
Ros. ℥ß. Tinct. Capsicum ℥ß. M. f. gargarism. ℞. Acid. Sulph. Dilut.
x. guttae. Decoct. Hordei. ℥vij. M. ℞. Super. Tart. Pot. ℥ß Mell. Despu
at. ℥ij. Aq. Hordei. ℥vij. M. A saline purgative is advisable in all
es, as ℥j of Sulphas. Magnes, but if much fever be present, the patient
ould be confined to bed, and the following saline draughts exhibited: ℞.
quor. Ammon. Acetat. ℥iij. Aqua. menth. sativa. ℥vj. Syrup. Aurantior
. M. f. haust. quart. hora. repetend. — ℞. Sub. Carb. Pot. xvij grs. Succ. Lim
. ℥ß. Spirit. Myrist. x guttae. Aqua. Distill. ℥vj. M. capt. quaq. tert.
ora. If there is any probability of suppuration taking place; it may

promoted by mild emollient gargles, as of the Decoct. hord. compos. of the Londo
Pharmacopoeia. An Emetic is sometimes directed with perfect safety, with the
w of promoting the bursting of the abscess. The decoction of bark may be emp
ed as a gargle when there are superficial ulcerations or specks, but if it be
en internally it will be found to aggravate the febrile symptoms. As
, therefore, as the pulse remains frequent, with thirst, and restlessness, saline
ughts only should be given. When the fever subsides, the decoction of Bark and
d may be exhibited with advantage: Decoct. cinchona. Infus. Ros. comp. aa ℥ij
f. haust. tert. in dies sepetendus. When the disease is inclined to be stationary,
blister to the fauces, or better to the upper part of the sternum, or behind
ears will prove useful. In the state of chronic enlargement of the tonsil, little
can be done by internal medicines, and gargles even of the most powerful
nd, are generally quite ineffectual. The disease sometimes yields in the most
nexpected manner, probably in consequence of some change taking place in
constitution, the nature of which is altogether inscrutable. The removal of
part, either by the knife, or ligature has been recommended by some authors,
en the disease has continued a considerable time. This may be done with
opriety in many cases; but as a general rule it should not be resorted to,
less respiration be impeded, or cough, or some other serious inconvenience
produced. Dr Gregory admits that this disease, is one of a highly inflamm
tory affection in most cases, and that it generally becomes a febrile disease,
n a constitutional affection is the consequence, and he likewise admits that it attacks
ersons who are in the vigour of life, and also those who are of a plethoric habit, =

t notwithstanding he contends, as I have mentioned above, that venesection is seldom
ever necessary. He states that the disease may terminate in suppuration if ne
cted, which is very correct. Now according to the pathology and treatment of high
lammatory action existing in the system, and the constitution suffering severely
m it," I ask the question," whether it would or would not be, the most direct and
ect manner of treatment to subdue the disease in question, by the copious abstra
n of blood both general, and local in the majority of instances, I most assured
would resort to the Lancet, and to Blisters, cupping, or scarification, in prefer
e to purgatives and local applications. The treatment of this disease should be
gorously antiphlogistic; and although Dr. Cullen asserts that the copious abstr
tion of blood is seldom necessary, general experience is decidedly in favour of
ompt and efficient bleeding in this affection. In slight cases we may sometimes
bdue the inflammation without blood-letting, but as we cannot be sure at first,
ether the disease will run a mild course, or acquire much severity, it is always
t, at once, to moderate the momentum of the circulation by depletion. Local bleedi
by scarifying the tonsils, generally produces excellent effects, and may be account
much more efficacious than the application of Leeches to the throat, or under the
rs. Hopp an eminent German physician, says, that blood drawn from the
sils by scarification, is the best, most certain, and prompt remedy we possess in
lection. Cupping on the back of the neck and under the ears may also be resorted to
ith benefit. The assertion is made by Baglivi, that he has known the abstraction
blood by cupping between the shoulders, afford great advantage in this affection

rually, purgatives, and the usual antiphlogistic diaphoretic remedys must be ca
ly employed. An active purge should be one of the first remedial measures
pted; the bowels must afterwards be kept freely moved, either by the daily
etition of purgatives, or frequent laxative enemata. A bolus of Sul. Mer. Hyd.
Pulv. Jalap. or from 15 to 20grs. of the compound extract of Colocynth. with 10
of Sub. Mur. Hyd; or a full dose of one of the neutral purgative salts, may
be recourse to for this purpose. Nitre with Antimony, in the usual propor
Nitrous powders, constitutes the best refrigerant Diaphoretic in this disease. Some
antage may be gained by placing the Nitrate of Potash on the tongue, and sw
lowing it as it is gradually dissolved ~~on the tongue~~ in the mouth. The Muriate
Ammonia, dissolved in water with the extract of liquorice, has also been part
clarly recommended. Much benefit may be derived from nauseating doses
Tart. Antim. et Potaspae. x Dr. Eberle, says he has frequently prescribed this
medy with the happiest effect. A grain of Tart. Antim. et Pot. may be dis
ved in Zij of water, of which a tecaspoonful is to be taken every half hour,
as to keep up a considerable degree of nausea for several hours. Emetics
re formerly employed in this variety of Angina; but their effects are mu
less beneficial in this, than in any of the other anginose affections. As soon
s the momentum of the circulation has been moderated by venesection, a Blister
hould be applied to the throat, or on the back of the neck. In slight cases of
his disease, rubefacients, particularly spirits of turpentine, or a liniment
mposed of two parts of Aq. Ammoniae to one of sweet oil, will in general
ffice for this purpose.

simple cases of the disease emollient poultices also, are very useful applications
n employed as soon as the disease begins, with warm pediluvium, and a purg
e, a speedy check will often be put to the further progress of the inflammati
. In such cases three or four folds of thick flannel around the neck, with
aid first mentioned, are sufficient frequently to prevent the development of
malady. In all instances however, when the inflammation is considerable,
cation is decidedly the most proper. Various gargles, and other applications to
te seat of the inflammation have been recommended in this affection. Cullen ad
es a decoction of oak bark, with alum dipolved in it, as a gargle in this dis
se. Dr Eberle gives the simple warm water, slightly acidulated with vinegar
preference, for this purpose. Little or no advantage results from the use of
gles in this disease, beyond that of dipolving and removing the viscid mucus which
apt to adhere to the tonsils and palate, and this is best effected by warm waters,
ther alone or with some vegetable acid, and perhaps honey. Pringle states that he
ver derived any benefit from astringent gargles; and Storck asserts, that he has
nown them to do very evident harm, by checking the exhalation and secretion
om the mucous surface of the inflamed parts. The inhalation of different
apours, is one of the oldest remedies in this disease: Hippocrates used the
apour of vinegar and water for this purpose. When the inflammation has
minated in the formation of a tonsic abscess, it should be pierced with a
ncet, to give exit to the matter, an operation which always gives immediate
lief from pain and difficulty of respiration, as I have before mentioned.

ter the pus is discharged, the patient should continue the use of some mild
a slightly acidulated or astringent gargle. x Professor Potter states, that if blood
ing is had recourse to in the commencement of the disease, that is, where it is
aployed copiously, it will seldom be necessary to repeat it, he also speaks
ghly of topical bleeding, by scarification, and recommends cupping, and Epis
astics. With regard to purging, he observes, when it is necessary, Sub. chlor. Hydr.
preferable, and when the pulse and state of the patient do not indicate bleeding
e an Emetic, and cathartics may also be used. Neutral Salts are good pur
tives. Emetics are very good remedies in the forming stage of the disease,
o here he gives the Tart. stibiat. et Potaspar. the preference. Cold must be avoided
th esternally and internally, the patients drinks should be warm, the room
which the patient is lodged should be also kept warm. When suppuration
has place, and an instrument cannot be introduced to puncture the tumour,
Emetic should be given. x Here Doctrs Potter and Eberle differ, the latter
tends that Emetics are hardly ever of any service in this disease, but I am in
ned to adopt the former plan of treatment with regard to Emetics, where the
mour is so situated as to be out of the reach of an instrument. As mild
this disease is considered to be in most cases, I would advise all persons
o are predisposed to it, to avoid all exciting causes, and wear flannel next
skin. Those who are labouring under Cynanche Tonsilearis, should live
steniously, and their articles of diet should be of a light and digestible natu
e, and by resorting to the appropriate remedies for the treatment of the disease=

they will have a speedy recovery.

An.

Inaugural Dissertation

On.

Dysentery

Submitted To the Examination

Of the,

Provost, Trustees & Medical Faculty

Of the

University of Maryland

For

The Degree of Doctor of Medicine

By

Robert Otway Blakey

Of

Virginia

March 1832.

To.

Alexander Franklin Dubin. M.D.

My friend and the friend of humanity, whose benevolence and amiability, will allways secure for him the respect of all ranks of society, while his great capacities and classical acquirements continue to command for him that hight among the literati in which his professional talents have placed him.

These pages are gratefully inscribed by his friend & pupil.

The Author

Baltimore
March 7th 1832.

An Essay.
On
Dysentery.

This disease generally prevails in the latter part of Summer and Autumn more than at any other season of the year; it attacks all ages, being however more fatal to females and children than to Males.

It is more prevalent in warm, than in cold climates, specially in the West Indias during the Months of August, September, and October, which is the rainy season of the year in that Country. The same may with great propriety be applied to the United States, that is, during the latter part of Summer and Autumn, if at that time the weather be damp and suttry, this disease is more prevalent, and vice versa.

Causes.

This disease may be sporadic, endemic or epidemic

is proved by many Authorities; not unfrequently
is produced by sudden changes of the atmosphere,
from heat to cold, dryness to humidity.
A sudden check of perspiration is probably the most con-
tantly exciting cause; high or mountainous, as well
very low situations are liable to this disease, eating
uit to an excess, irregularity of diet of every kind,
cessive fatigue, long exposure to the direct rays of the
un, and the Night dews are also exciting causes, more
pecially in our Southern States
It is the opinion of some, that this disease is contag-
ous, but we have some very respectable Author's both
f Europe and this Country, who are quite unequivocal on
is point; for says," Doctor Dewees, (whose authority will
ot be called in question) we have been very attentive to this
uestion ever since our commencement in business; our
pportunities have been ample as well as frequent, but
n no one instance have we had reason to believe it to
ossess this quality. From one whose experience is so
xtensive, and so well capacitated to judge, we think

uld go far to prove the noncontagiousness of this disease.
t is also the opinion of Dr Gregory, that this disease is
t contagious unless, in camps aha on board slave boats &c.

Diagnosis.

Dysentery is not easily confounded with any other
isease; from diarrhœa it may be distinguished, by the
eculiar symptoms attending the former complaint, as tenes-
us and tormina, the latter of which is very excruciating,
d the occasional discharge of round hara feaces, called
cybala formed in the cells of the Colon; from Cholera
orbus and Hæmorrhoids the diagnostic symptoms are, (with
e above) bloody, mucous and diminished evacuations, and the
ools, whether fœcal or mucous, tinged or streaked with blood
eir peculiar odour, together with fever and the severe sufferings
f the patient will readily distinguish this affection of the
owels, from all others of the abdominal viscera.

The morbid appearances of this disease are inflammation of
e mucous membrane of the Alimentary canal, but the force
f the phlogosis appears to be expended more particularly on the
reat intestines and Rectum; sometimes the inflammation has

en known to extend up the jejunum and ileum, but
are disposed to believe this is but seldom
In severe and protracted cases the inner coat of the great
tustine is thickened and formed into small irregular
tubercles of a white or yellowish colour, with thickening
the peritoneal and muscular coats: the surface of
e intestine is sometimes found rough and besmeared
ith a glairy, purulent matter, or a bloody sanies, with
metimes ulceration of the inner coat dispersed in differ-
t places but they do not appear to be in proportion to
e violence of the previous inflammation and therefore
n not be considered as an essential cause of dysen-
ry

Prognosis

Dysentery may terminate in health, another disease,
in death: our prognosis must therefore, be founded
n its approach to one of them.
If the remedies (proper) have been successfully used
this disease we find an abatement of all the symptoms
hich characterize it. Fever abates, pain diminishes:

nesmus is appeased; calls to the chair become less
equent, stools more natural; and not so much tinged
th blood nor so offensive, the pulse more natural,
at is, soft, open and more regular and convalescence
eedily takes place. But unfortunately this is not
ways the happy termination, for instead of the melio-
ion of all the symptoms, they are aggravated under
best adopted treatment, the pulse accelerated, tenes-
us nearly insupportable; tormina aggravated, stools
eatly offensive and bloody portions of flesh, as
it might be part of the inner coat of the intestine
rown off by ulceration, and very frequently delirium
a death.

Symptoms.

Generally commences with slight symptoms, or by a
eneral prostration of strength, with severe pains in the
bdomen becoming more and more insupportable, and
roducing a sensation of twisting along the course
the Colon from its origin to the Anus; sometimes
ttended with nausea and vomiting, frequent calls

stool, with considerable and often unavailing
orts followed by the ejection of some filamentous
ccous mixed with red streaks or even pure blood,
thout any natural admixture of feaces unless the
casional discharge of scybala which only gives mom-
ary relief; painful strainings, pungent and
rning sensations in the rectum in the intervals
straining: abdominal pressure does not occasion very
eat pain, the weakness which is sometimes extreme,
generally in relation to the violence of the gripings
d frequency of the evacuations.
The nervous system suffers severely; great weakness
evails in proportion to the duration of the disease and
would appear to be the result of the dysenteric pyring
at prevails, but we readily concur with Professor Potter,
hat this abject state of debility is not produced by the
vacuation of cathartics, but the effect of the irritable state
the intestines communicated to the stomach, brain and
hole nervous system, and the violence of the tenesmus
uses universal sympathy, and free purging by medicines

lates or removes the pain and consequent debility."
There is more or less fever; in many cases of a
highly inflammatory character, the pulse is frequent, some-
times full and strong, but if not reduced in two or three
days by proper remedies becomes irregular and corded;
tongue coated with a dark fur in the centre, and
the mouth and fauces dry and clammy.

Treatment.

Called to a patient labouring under dysentery, if the
pain be severe and constant, pulse strong full or corded
we then draw blood to the extent necessary until the
pain is diminished and should even (if possible) be
carried so far that pain shall not be felt upon any
portion of the patient.
This remedy affords the patient a better prospect for
recovery than any one remedy with which we are
acquainted, for as soon as the circulation is reduced
the pain and uneasiness ceases or diminishes and the after
treatment will have a much happier effect, and
the patient will have a speedy and happy recovery

ould this rule not be observed and the patient
rong and plethoric he may be cut off in a few
ys or weeks or doomed to a lingering and painful
ease; and will at last have to be cured by the use
the Lancet.

hile speaking in such strong terms as the above, we are
are that there are some exceptions in this disease as well
all others; for some patients can not bear the liberal
e of the Lancet, nor even at all.

fter venesection has been used, emetics will be found
nerally very efficacious. Ipecacuanha given in a vesicle
with the addition of one grain of Tart: Antimonii
be found to answer better than any other
metic medicines have been used in this disease in the
rm of Clysters by Mr T. Clarke and that with success as we
e assured by him, he used the accession of bruised Ipecac-
nha in large quantities.

fter the stomach is well cleansed we should next open the
owels, and as a general rule we should prefer the
Muriate Mercury with the addition of a few grains of

Ipecac: as in the following way:

℞ Sub Muriate Mercury VIIIj grs

" Pulv Ipecacuanha .... VV grs

Or ℞ Calomel ..... VIIIj grs

" Pulv Rhei ..... Vj grs

" Pulv Ipecac: ij grs.

be given at night and followed the next morning by ½ ounce of C. Oil; the purging should be continued throughout the whole disease, by so doing we will bring away the hardened feaces that are pened up in the cells of the colon and relieve the patient of much uneasiness and suffering.

If we suspect the stomach to be in a state of acidity, eructations, stools green or yellowish, we should correct it by administering Antacids, the Cretaceous preparations joined with some of the mild purgatives will be found to answer an excellent purpose as the following:

℞ Creta Preppt: ..... Vj grs.

" Pulv. Rhei ..... X grs

be given once or twice a day, if the patient has been well

ged the chalk may be used alone pro re nata: Magnesia
the Aqua Calcis will also answer well.

ten the circulation is reduced and the alimentary canal unloaded
diaphoretics must be resorted to, and when judiciously prescr=
d they will have a very salutary effect indeed; nothing
d more effectually relieve the tormina than small doses
Ipecacuanha, conjoined with Opii, the following may be used;

℞ Pulv. Ipecacuanha . . ij grs
" Pulv. Opii . . . . ¼ to ½ gr.

peated every two or three hours, the Ipec: will have the
ect of acting as astringent as well as diaphoretic, and
Opium will allay the tormina and tenesmus which is
very important desideratum in this disease, if there should
too much excitement in the sanguiferous system, so as to
hibit the use of opiates, Ipecacuanha and Tartar Emetic
ay be united and repeated every two or three hours, or
em alone: the Tartar Emetic solution may be used with
eat advantage, in those cases where we cannot use the
ancet so as to subdue the sanguiferous system, it may be
ed in the following way, by adding two grains of

rt: Antimonii to one pint of water, a tablespoon full of
i may be taken every two or three hours as may be neces-
y. The Sulp. Zinc is also recommended in this disease
Mosely, "I give it," says he, "at first without Alum, in
ficient doses to cause evacuations and afterwards with the
m in nauseating doses, and frequently with opiates
night, his prescription is as follows. Take.

Sulp Zinc	ʒiij
Sulp Alum	ʒj
Pulv Coccinel	iij gr
Aqua Bulientis	℔j

x these in a mortar, until the solution is cold and
sediment deposited then pour it off, dose a table
oon full for an adult. In referring to the testimony of
osely in favour of this practice, it must be recollected
at he employed it in tropical dysenteries; a circum-
ance which may perhaps, account for its less favourable
sults in the treatment of more Northern Climates.
The warm bath, will sometimes act like a charm
nder some favourable circumstances, with the caution

t to let the patient remain in the bath too long; warm
entations to the abdomen &c.

- there be much pain and smarting at the verge of
Anus, a suppository of Opium may be introduced into
rectum, or an ointment made by triturating lard and
ium together, and rubbing it on the verge of the Anus.
ections may be used to great advantage to relieve that
ssant tormina with which the patient is most always
nbled, flax seed tea and Laudanum, or starch and
udanum will answer an excellent purpose, to be used
may be necessary.

Where the disease is disposed to become chronic and
ll not yield to the above treatment, we must then
ve recourse to Mercury in such proportions as
ill excite a slight ptyalism; in fact even in the
rst or incipient stage of dysentery, calomel
ay be used and even carried so far as to effect
e gums moderately; whenever the Calomel has
vertised its effects on the system by producing
tenderness on the gums we may invariably —

-gnosticate a favourable result, and we think, that may go farther and say, that a patient is not in dan- of death if his system is under the influence of Mercury the extent as to show its effects on the gums, it will ulge the hepatic system which is more or less affec- in this disease, and will happily equalize the -culatory system and bring about a speedy nvalescence; nothing will answer better than the ch-dysenteric pill, consisting of the following combination

℞ Calomel . . . . . xij grs
Pich. Ipecac: . . . xij grs
" Opii . . . . iij grs

be maid into twelve pills, one to be given morning d night until a slight ptyalism shall be prod- ced. This combination tends at once to allay the local irritation and pain of the bowels, to cor- ect the biliary secretions and to determine the rculation to the surface and excite diaphoresis. The Unguentum Hyd: may be used in conjunction hen we wish to affect the gums immediately.

may be rubbed in on the inside of the thighs
ce a day.

Dr Johnson highly recommends Calomel in
ruple doses in tropical climates in dysentery, but
obably such treatment would not suit more
rthern climates

delsind, a German Physician of celebrity, speaks
y favourably of the employment of Sulphate, in the
e of twenty grains with double the portion of Gum
abac in the cure of this disease. The bloody discharge
, "says he together with tormina and tenesmus often
ase as soon as a few doses of this mixture have
en administered." This practice I judge is not
ry valuable, as we have very little said about it,
ther among the American or European Physicians.
e drink of the patient should be confined to some
e of the demulcents, such as flax seed (Semen Lini)
ea, Gum Arabac (Acacia Arabica) solution, or a
coction of Slippery elm bark (Ulmus Rubra)
latter may be found in abundance in many

tions of the United States; it grows plentifully in
ginia, at least in most of the Counties surrounding
University of that State, I have seen many cases
dysentery while pursuing my medical studies, as this
ase has been very prevalent for the last two or
ee years in that State or at least the part in which
esidea during the time I was pursuing my Medical
ucation, and I believe that many cases of
is disease may be cured with the use of this bark
e, particularly if the circulatory system is not
uch excited, nor the liver engorged. In such
ses it would not answer alone, without the
d of more powerful remedies; it may be used
every stage of the disease.
he decoction made of this bark is by no means
pleasant, the patient will drink it when he refuses
flax seed tea or even toast and water which are
y common drinks in this disease.
Before we conclude this dissertation we will say
few words more on the use of drinks and more

rticularly cold water; We have frequently noted
at if the patient makes use of cold drinks, that
not unfrequently produces or brings on termina-
obably owing to that sympathetic action which
known to exist in the whole sytem. And ~~in~~ the
pression being made on the stomach is conveyed
om thence to the intestines inviting contractions of
fibres, thereby producing that continuous sympathy
poken of by Hunter.
When the patient becomes convalescent he should guard
ainst the inclemency of the weather, and wear
lannel next to the skin.
A flannel roller is said to be good, worn around
e abdomen so as to support the contents of that
iscus.
The patient should abstain from all animal
eats and broths, and observe a very abstemious
ourse of diet, and by so doing he may again
e raised up to the comfort of friends and
lations from ~~of~~ a miserable and most painful disease.

An

Inaugural Dissertation

on

The Modus Operandi

of

Blood-letting.

Submitted to the examination of the

Provost, Trustees, and Medical Faculty

of the

University of Maryland, for the degree

of

Doctor of Medicine

by

John Walter Butler

of

Alexandria

Louisiana.

March 1832.

Introductory Remarks

Bloodletting, regarded as a remedial agent, may, with much propriety and justice be considered, as one of the most efficient and powerful adjuvants to the Physician. It is indispensable for treating successfully numerous classes of diseases which are at some period of their progress, more or less blended with Phlogosis and consequently requiring the judicious employment of general or local depletion. But it is in the Phlegmasia, more especially, that we see the Physician, however great may be his predilection for other agents,

hailing it as of primary importance. For without its employment, he would have but too wide to know the destiny which awaits his patient. A disease trivial in its onset, he would expect to become alarming and even fatal from the neglect of this remedial measure. If to the physician the lancet be essential for success, and the safety of his patient, it may be justly viewed as the Hercules in surgery; without it, the surgeon would in vain look for the sheet anchor upon which he might with a probability of success rest the issue of his humane endeavours.

Historical Sketch of Blood letting.

It has been said, and with much truth, that the practice of medicine is more or less regulated by fashion. This observation has in no instance been more remarkably verified, than on the subject

of which we are to treat. Thus, at one time, we see the place or part from which blood was to be drawn, designated with scrupulous minuteness, and prescribed with such decision, and assumption of authority, as to repress the seeming rashness of the most presumptuous innovators. The ancient physicians assumed for a short, and for almost every disease, its own appropriate vein. But it is evident, that, rules dictated by caprice, could not long be held in veneration. As theories were subverted, the rules of practice no longer remained the same. So that, the parts designated by the physicians of one age, were denounced by those of the succeeding; the operation at recommended and encouraged by the public lectures of some, was almost entirely prohibited or denounced by those of other professors.

However ridiculous or absurd the numerous Theories

of our ancestors may appear, necessarily extending to an equally incorrect practical application of this measure, we should not too hastily censure them for their imbecility, in a science yet in its infancy, nor can we wonder at their not being more correct, with an utter ignorance of the circulation of the blood. After the discovery of Harvey the gradual subsidence of such notions as untenable with the acknowledgement and universal reception of its accuracy, might reasonably have been anticipated.

So far as we are conversant with the medical history of that age, this result was in a measure realized, yet we find impure theories became more extended and of much greater moment to the welfare of society, and were frequently set forth under the imposing patronage and support of some distinguished name. One hypothesis has been adopted for a few years, learned men

have commented upon it. Some have diffusely explained it; others have abridged it. In the mean time, during the succession of a few years, another original genious has arisen, exposed the weakness of his predecessors system, and established a different one in its stead. This after having the like compliments paid to it by commentators, expositors, and epitomisers, has sunk in its turn into oblivion and contempt. Thus existed the mechanical physicians, who by bleeding thought to lessen the moles Mo-unda, and consequently to restore the equilibrium, between the weight and the power. We usually employ it to lessen the power. The humoral pathologists used it constantly for another purpose. As they supposed the cause of disease to exist in the blood, they were anxious to examine its state. Eight or ten ounces were therefore often taken with this view; and the appearance of a slight buff on the surface determined the necessity of a

repetition of the evacuation. Succeeding this, was the widely extended system of Boerhaave who adopted both the previous views. During the reign of which, we are not surprised that blood-letting was very fashionable, and that the notion very generally infected the Schools of Medicine.

Thus we see that blood-letting like the most of our curative means, as employed by exclusionists could not but have been injurious, rather than beneficial to Suffering humanity.

The rules designating certain situations, in particular diseases were very soon disregarded, and observed only so far, as might comport with convenience to the physician, or whim of the patient.

As practiced in the present day, blood is seldom drawn from any part but the arm, if we except local blood-letting, and so universal appears to be the impression even at the present time,

that the opening of a particular vein does not materially influence its effects, that to practice it elsewhere as a general measure, or evince a disposition to make choice of one side of the body in preference to the other, as better suited to certain diseases, would be looked upon as a work of officiousness, if not blind attachment to antiquated notions.

That bleeding as performed in the present time, and in the usual way, is an eminently useful, and important remedy, no one would pretend to deny. But I conceive that the full advantage to be obtained from this invaluable remedy in the treatment of several diseases are not always obtainable from confining the abstraction of blood to a particular situation.

May we not in these cases obtain beneficial effects more certainly and speedily, by the loss of a less quantity of blood drawn from situ

ations according to the seat of the disease? It is not improbable I think, that in consequence of overlooking the advantages which would arise from such a practice, that we find it necessary to abstract such immense quantities of blood in many diseases, which were formerly treated more successfully by moderate bleedings. Yet we do not wish to be understood as favouring the antiquated notion that every organ and almost every disease has its own peculiar vein.

On the Modus operandi of Blood-letting.

It is our intention to take a view of blood-letting in its modus operandi as a remedial agent; and also endeavour to show, that in the practice of the medical profession, there are certain cases, in which it would be advantageous to abstract blood from situations other than the arm.

Bleeding is said to be general, when employed

for the purpose of lessening the general mass of circulating fluid, as in general or constitutional affections; Local or topical, when employed with a view to lessen the quantity in a particular part, as in evidently local inflammations or congestions.

General blood letting is subdivided into two kinds. 1st. The opening of a vein, called phlebotomy. 2d. The puncturing of an artery called arteriotomy.

I.

Phlebotomy. On the application of a ligature to a limb, the return of blood is retarded in the superficial veins immediately. The result is, that they become distended, a greater quantity of blood being contained in them than natural. The distention beginning at the ligature gradually extends down the limb, in the course of the obstructed veins, which becomes

ing ged offer more resistance to the action of the supplying arteries, the capillaries and small branches become involved, until finally the principal trunk of the limb participates in the general distention.

As the return of blood from these veins is interrupted, the Vena cava, into which they ultimately terminate, is deprived of that portion of blood preternaturally detained, and likewise of the issuings, which they, or their arteries might supply. So that the blood in this great venous trunk is diminished, as well as retarded in its course to the heart. Such being the state of the parts it is evident, that the limb contains more, and in the same ratio is the blood diminished in other parts of the body.

The vein is now opened, but this does not materially affect the condition of the part. The interruption to the return of blood continuing, of course its

consequences remain; so that although the tension of the vein which is opened may be lessened, the other vessels are not evacuated, nor lessened in their tension. It is evident, that as an abstract blood, in the same ratio do we diminish its mass in the system. But we have seen that the part is not affected with respect to lessening its due quantum of blood. It must then be obtained through the medium of the part operated upon, at the expence of the whole system. This is accomplished by derivation, and revulsion, the sanguine fluid rushing from all parts, affecting first and principally the capillary vessels, causing a revulsion from them, and a derivation to the part from whence the blood escapes. It is this movement of the blood, which keeps up the quantity in the part operated upon.

The obvious effects of blood-letting are, 1st. The removal of tension, causing a diminution of the

vis a tergo, as also taking off from the expansive excitement of the brain. 2ly. An accumulation or derivation to the part upon which the operation is performed. 3ly. And a consequent abstraction or revulsion of it from all the other parts of the economy, affecting principally as we have seen the capillaries, hence the importance of blood letting in congestions.

We may be accused, however of neglect and inattention in not noticing with therapeutical writers, the diminution of the actual quantity of blood or of its crassamentum. This however is so inconsiderable, that in animals bled to death the redness of the muscles is scarcely affected, if at all. The colour may necessarily be changed by repeated bleedings, but we can connect this alteration only with chronic weakness, not with the salutary changes from bleedings.

But phlebotomy accomplishes another not

less important purpose. It evidently slackens or represses the momentum of the circulation, and diminishes the action of the heart, as will appear from the following experiments of Doct Hales.
He opened the vessels of living animals, adapted glass tubes to their orifices, and observed to what height the blood was thrown at each systole of the heart; he then drew from the animals different quantities of blood, and observed the force of the heart to diminish in proportion as the blood was abstracted.
This effect of blood-letting on the action of the heart, I believe would pretty generally occur in a healthy system, or where the balance of the circulation is not materially deranged. But in disease accompanied by congestion, and consequently a derangement of the balance of the circulation, I believe the reduction of the force of the heart, and action of the arteries frequently would not occur,

and indeed it is quite evident that they are sometimes increased, as in what is called the depressed pulse, which frequently becomes full and expanded under the lancet, showing very clearly that the action of the arteries, as well as the propelling force of the heart are increased.

Doct Rush supposed that we would invariably observe, the above phenomina in this depressed pulse, from bleeding. But this by no means accords with more recent experience and observation, nor do I think that it can be reconciled with the condition of the part, having as an attendant this state of the pulse, hence notwithstanding the high authority, above quoted, in support of the invariable rise of the pulse, I am disposed to believe that it as often has the opposite effect, that of prostrating the system, too often beyond recovery.

This sluggish, and depressed state of the pulse is known to be the effect of any argument of some of the

internal viscera, and as this congestion takes place in the capillaries, and parenchyma of the organs, it is evident that the longer the obnoxious force continues, the greater will be the effects upon this system, consequently there is a suspension of the functions of the part, and a diminution of its vitality, following up this definition of congestion, it is obvious that if we attempt its removal by general depletion, we would too far short of our purpose, although we would probably diminish the congestion, yet it would be at the expense of the general system, and not of the part alone, since they would be left in the same condition with respect to each other as before bleeding. We would therefore propose as a preliminary measure, to bleeding & tensive stimulants to the surface, as well as internal stimuli, or local blood-letting over the part effected.

Phlebotomy in various regions.

1st. Brachial Phlebotomy.

On the application of a ligature to the arm, we observe the superficial veins becoming distended, commencing, and gradually extending from the ligature, to their radicles or inosculations with the extremities of the arteries, which becoming effected, the distention is continued, until finally the main artery is involved. Nor does the effect cease here, it continues on to the axillary and subclavian portions, and to every branch that is given off by them. Now it is perceptible, that in proportion as the limb contains more, the other parts of the system contains less blood. It is from observing this fact, that we are enabled to account for the diminution of pain and dyspnoea in pneumonia, sometimes following the application of a ligature to the arm, as also the good effects arising from the old practice of applying ligatures in

Apoplexy. If the vein be opened we observe the same phenomena before described.

From this view of the operation of blood-letting in the arm, we make the following conclusions.

1st. That it may be employed there whenever a mere evacuation of blood is required, as in plethora unattended with local congestion, and without a marked derangement in the balance of the circulation. 2d. It may be employed there, in all cases where we desire to produce a general effect upon the system, without reference to a particular part, as in Synocha, in convulsions, and to produce general relaxation, for the purpose of retaining a hernia, or the reduction of a dislocated limb. 3d. It is to be preferred in diseases of the lower extremities, of the pelvic viscera, uterine hemorrhages, and hæmorrhoidic affections. 4th. It is evident that blood-letting from the arm, is not to be advised in inflammations about the head, because the arteries which go to

that part, would necessarily participate in the derivation, which is obtained. Hence we see the older surgeons, though entirely ignorant of the circulation, strenuously prohibiting the operation in the right arm, while they admitted its expediency in the left. This, no doubt they had observed in practice, since anatomy clearly indicates, and fully justifies the truth of the observation. On the right side we observe the Innominata Carotid and Subclavian, coming from a common trunk, the Innominata, they would consequently both be involved in the derivation obtained from bleeding on that side, though not in an equal degree. On the left the Carotid and Subclavian take their rise immediately from the Aorta, consequently in the operation on that side there would be a revulsion more or less from the Carotid, in the derivation effected in the arm.

It is said that fainting is produced more speedily by bleeding in the left arm, than the right. The

rationale of this fact may be given, by supposing a certain degree of tension necessary to preserve the energy of the brain, and a constant exercise of this energy being, for the due continuance of the action of the heart, necessary; hence, profuse hemorrhages, or artificial evacuations, by removing that tension and fulness, produce syncope, and it is obvious from the brain we have taken of the arteries which go to supply the brain, that the quantity of blood in that organ, will be more readily diminished, by abstracting it from the left arm, than from the right. 5th. It is obvious from what has been said, that blood-letting is contraindicated in the arm, when parts are involved, which receive their blood from the subclavian, axillary, or brachial arteries.

But it is said, or may be asserted, that blood letting in the arm is daily resorted to in all those cases contraindicated by our conclusions, and that with marked advantage. This can not be denied.

But if it prove advantageous, it can be only by the evacuation produced, without the proper effects of derivation and revulsion.

Pedal Phlebotomy.

In treating of bleeding from the foot, it will be sufficient to refer to our observations on venesection in general.

The effects which obtain, as regards the limb to which the ligature is applied, are the same.

But instead of acting as a revulsion from the other limb, as in the case of bleeding in the arm, the derivative effects are the same or nearly so in both the lower extremities. The reason of which, is that the Iliac arteries both proceed from the same trunk diverging at the same place, with the same angle, and of the same calibre; the derivation which affects one must necessarily involve the other nearly in the same degree; the large veins which observe pretty much the above rules, are affected as before said.

It should also be remarked that the derivation in this case is more extensive than the former, as from anatomical connexion, the pelvic and abdominal viscera must participate in the derivation produced. Another peculiarity of bleeding in the foot is obtained from the practice of placing the foot in warm water. The action of Pediluvia, I shall not pretend to describe, but merely observe, that in the case under consideration, it greatly adds to the derivation, inviting a more copious afflux of blood to the limb.

I think we can now see readily, that bleeding in the foot, must in many cases be preferable to the arm. I infer that it is to be preferred. 1st. In apoplexy in its severities, and in all cases desiring to relieve the brain by drawing blood. 2dly. It is to be preferred in diseases of the superior extremities, of the throat, hemorrhages from the nose, lungs &c. 3dly. It is preferable in suspension of the menses, dysmenorrhea &c. 4th. Blood-letting in the foot is contra-indicated in diseases

of the lower extremities, in inflammatory affections of the pelvic and abdominal viscera, in uterine hemorrhages, hemorrhoids &c.

Cervical Phlebotomy.

Bleeding is sometimes performed from the jugular vein. It is evident, however that the necessary compression with a bandage, in the operation, would produce an accumulation of blood in the brain. This operation is sometimes resorted to in cases of children, in very corpulent habits, and sometimes with advantage in expansiveness of the brain, threatning immediate death.

II. Arteriotomy.

The next, and last division of general blood-letting I believe to be seldom, if ever preferable to phlebotomy. Owing to the difficulty of puncturing the artery and often failing after succeeding in that, to obtain a sufficient quantity of blood, it appears by common consent to be thrown aside almost entirely.

It may, however, be sometimes expedient to resort to this method of letting blood in the cases of Children dangerously affected with any of the Phlegmasiæ, and whose veins are either so deep seated in consequence of the large amount of adipose tissue which envelopes them, or so small, as to afford little prospect of furnishing a sufficient depletion. In these instances the most appropriate artery to be selected for the operation, is generally admitted to be a branch of the temporal.

III. Local Blood-letting.

The next general division is Local Blood-letting. Which is performed either by the application of Leeches, or Cups, or by cutting the visibly distended vessels with a lancet. The modus operandi of local Blood-letting has been the theme of much discussion, and controversy among physicians. It does not appear, as yet, to have received an explicit, and well defined explanation, of the phenomena which attend this important secundial measure in the cure of diseases, nor its

peculiar influence on the animal system. To ascribe its effects wholly to derivation, and revulsion, would be deemed insufficient to account for one of its most important phenomena, viz. its powerful effects over the action of the heart.

Doct. Armstrong makes the following remarks relative to this important phenomena. He says. I have made many experiments as to the power, which local blood-letting has over the action of the heart, and have found it infinitely greater than I had previously supposed; so much so indeed that I am now induced to believe, that the principal efficacy of local blood-letting, rather depends upon this, than any other cause. Again he says. In the course of these experiments, too, a remarkable, and unexpected fact was presented to my observation: namely, that the action of the heart may frequently be weakened by small quantities of blood abstracted by the lancet when moderate or large quantities would be required to produce the same effect

by depletion from one large vessel. Whether this experimental fact can be adduced in support of Mr. Hunters assertion, Viz. that a part of the action of local blood-letting is obtained through the medium of Sympathy, we confess ourselves incompetent to say positively, at the same time conceiving ourselves at liberty to make use of it as such, believing as we do, that in these experiments some Sympathetic action must have taken place; trusting confidently in the accuracy of the assertions made by the experimentalist. 1st. Because the experiments seem to have been made not for the purpose of supporting any favourite theory or doctrine. 2dly. Because of the well known eminence and character of the experimenter. Doct. Armstrong speaks of the fact of the occurrence of the phenomena, as attending his experiments, without attempting to explain in what manner the action of the heart could be so affected.

As Physicians it is quite sufficient for us

suppose to be in possession of the indubitable fact. But as physiologists we would desire to investigate the subject, and endeavour to point out the manner of action between the cause and effect. But here we are met by insuperable difficulties. To ascribe it to the abstraction of the fluid from the capillary circulation, it consequently being arterial blood, would be insufficient, and unsatisfactory, since we would ask why those spontaneous hemorrhages, as from the nose, lungs, stomach, uterus &c. do not produce the same effect, here we find the action of the heart diminished in proportion to the quantity of blood abstracted. Driven from this post. We are led to the conclusion, after examining the subject as minutely as we are enabled, that by the application of ice &c. (for from this the effect is more powerful) some peculiar sensation is produced in taken upon the sentient extremities of the nerves,

which by sympathy (for we can not otherwise explain it) has a sedative influence over the action of the heart; and we are induced to believe that the experiments of Doct Armstrong go to strengthen this conclusion.

Local Sanguine depletion is performed.

I. By leeches, the application of which is often preferable to cupping, which is attended with more irritation, than a acutely inflamed surfaces can bear, especially when it is to be frequently repeated.

The leech is armed with an apparatus, which he plunges in the parenchyma of the skin, thus always produces severe pain, consequently establishing a local irritation, which causes a determination of the fluids to this part. This derivation and revulsive effect is felt at the most remote part of the economy. In the application of leeches, we have two phenomena, 1st. An irritation, 2d. A fluxionary movement of the fluids to the irritated

Part. II Cupping.

By the application of cups, we have the same phenomena attending as in leeching, except, that in cupping, there is a greater mechanical force which acting in the neighborhood of an inflamed organ, will sometimes counteract the good effects of the remedy, hence the superiority of leeching in all acutely inflamed organs, attended with much pain.

In all chronic diseases, and congestions of any standing, local blood letting is preferable to general, and cups generally better than leeches. The disease is a deep seated one, and one which we may relieve by general depletion, but the effects of this, as we have seen is only obtained through the medium of the general circulation, hence we would invariably debilitate our patient unnecessarily, and often destroy him, by adopting this method.

III. The third mode of local depletion is by or

viding the visibly distended vessels with a Lancet.
This is confined almost entirely to inflamm
ations of the eyes

On Acemoptuë

An Inaugural Dissertation

for the Degree of Doctor of Medicine

Submitted to

The Provost, Trustees and Medical Faculty of the

University of Maryland

by

J. G. Brehon

of N. Carolina

March 1832.

It is to be regretted that most Systematic Writers, when they come to treat on the Class of Diseases, to which the Subject I have chosen belongs - damp the ardor of the Student, by declaring that they are less frequent and less interesting than other Classes - fevers for instance: that they rarely occur in a Symptomatic form: and that when they do occur, are to be regarded rather as an accident than a disease. The unfortunate consequence is, that viewing them in this light he pays during the period of his study, but little attention to them, or it may be passes them by unnoticed. The propriety then may well be questioned of thus presenting a whole classification of diseases, which should be always important because they are often fatal: and admitting them to be accidental, it is still to be doubted whether for that very reason

they should not require more of his studious consideration than those, which are every day forcing themselves upon his practical care.

In submitting the following remarks I would wish to confine myself strictly to facts: Hypothesis is neither to be expected nor desired from one who has no opportunity of appealing to his own experience; and I shall be abundantly content if it is acknowledged that I am borne out in all my statements by what I have gathered from Lectures or from Books.

Hæmorrhage.

Hæmorrhages have been divided into

General — which is rarely found: implying a predisposition in the system to this particular affection: and

Local: when they are arranged according as they happen in one or another of the great cavities in the body.

An important consideration in the doctrine of Hæmorrhage is its frequent occurrence with fever. This has given rise to one of the older pathological distinctions among Hæmorrhages: viz - into

Active - when occurring with and accompanied by Fever: &

Passive - when arising solely from universal constitutional debility: and produced by various causes, whose tendency is materially to weaken & to shock the System. Under this head will come the latter Stages of the Disease, when frequent attacks have led to an alarming state of weakness. Accompanied by and reciprocally the cause and the effect of this weakness is that morbid tenuity of the blood (seeming rather bloody serum than blood itself) which we often witness after repeated & long-continued Hæmorrhage.

There are three Sources, which chiefly merit attention as contributing to produce rupture in an internal vessel. Hæmorrhage may be caused by & proceed

1st From Plethora or praternatural fulness of the vessels - induced by free living and sedentary habits: 2nd From local Congestion or unequal distribution of the blood thro' the System: or 3rd From the weakness of the Coats of the vessels themselves. This last, like many other defects in organic structure, is often found hereditary:- particularly with persons of Scrophulous diathesis, blood may exude thro' the coats without any rupture. The fulness and quantity of the discharge will of course depend on the greater or less laxity of the Integuments - the coats, which is owing to the greater or less Scrophulous tendency.

Haemorrhage may take place from the arteries - or from the veins. Arterial haemorrhage occurs in Early life - venous at a later period. And this is to be accounted for by the relative density of the coats of the different vessels at different vessels ages. The calibre of the arteries is greater in early life - their coats less dense: because the body is growing, and at that period, Composition

is carried on faster than Decomposition: at a later day the calibre of the arteries is diminished, while that of the veins is increased; and more matter is returned by the latter than can be carried out again by the former.

With these preliminary remarks upon Hæmorrhage generally, let us descend to what has been the principal subject of our attention – viz

Hæmoptuë: which has been arranged by Cullen as a particular Genus, in the Class Pyrexia and Order Hæmorrhagia.

It is characterized by spitting up (as its name imports) florid or frothy blood: – preceded by fullness, heat and oppression about the chest – increased by a full inspiration – some uneasiness in breathing, a short tickling cough – irritation about the Larynx and a saltish taste in the mouth.

We must distinguish it from Hæmatimesis. In Hæmoptuë, the blood discharged is sparing in quantity – florid in color and mixed with frothy mucus. In Hæmatimesis it is thrown up in considerable

quantity, darker, and mixed with the contents of the Stomach.

The Predisposing Causes in Hæmophtiæ are Plethora Scrophulous diathesis, the period of Life, a mal-conformation of the chest. It occurs most usually between the ages of 15 and 25.

The Exciting causes are numerous :- any violent Exertion of the whole body - (as wrestling, leaping, running &c) or of the lungs in particular: (as long and loud speaking, playing on wind - Instruments of Music, blowing flags &c); suppression of the Catamenia or even of any Customary Evacuation; & lastly the amputation of a Limb.

Persons of a sanguine Temperament, narrow Chest & prominent Shoulders are most especially liable to it: but yet it may be excited in any one by Pleurisis, Peripneumonia &c the fore-runner generally of a favorable termination.

Symptoms.

Hæmophtiæ is preceded by rigours and congestion of the chest, titillation of the Larynx,

bronchia and fauces, vomiting and a difficulty of breathing.

When the disease proves fatal, we find on dissection a considerable quantity of clotted blood in the Lungs and Inflammation around the ruptured vessel.

Treatment.

When Hæmoptisis occurs in persons otherwise in good health, it may be checked by simple means:- Venesection, mucilaginous acidulated drinks, rice containing alum nitre &c. These remedies will generally suffice if the antiphlogistic Regimen be strictly enforced

But if the hæmorrhage continues or has been considerable - attended with heat in the chest frequent cough, difficulty of breathing, a full and hard pulse, we must repeat the Bleeding: and after having, by this means, relieved the most urgent - most dreaded Symptom, Congestion of the lungs, we must provide

against its recurrence by applying cupping-glasses, Exhibition of nitre in combination with mucilage as a drink, Saline purgatives pediluvia, sinapisms to the Extremities, free admission of fresh air, iced & cool drinks.

When Haemoptue proceeds from Suppression of the Catamenia or other wonted Evacuation we must seek to restore them by appropriate medicines.

The foregoing remedies apply more particularly to bronchial haemorrhage, or the Exhalation of Blood from the mucous surfaces of the air. Tubes when the quantity is usually small: but where haemorrhage occurs in pulmonary apoplexy the blood is thrown up in such masses that it seems to be vomited.

In cases of this Kind, we must draw blood in large quantities from the arm - remembering

that the benefit derived will be from the sud-
denness and quantity of the abstraction — one
good bleeding being of more service than many
small ones often repeated. After the con-
gestion has been removed, there will be much
advantage in the application of a drastic pur-
gative

When Haemoptisis is intermitting we must
keep the circulation equalized and administer
Tonicks.

Where the Haemoptisis is attended with an
irritable state of the System, anxiety, coldness
of the Extremities and restlessness Opium has
been found beneficial

When Haemoptisis takes place in relaxed
and debilitated habits we must relieve it by
the administering of Tonic medicines and an
invigorating diet.

— An —

Inaugural Dissertation

On Hernia Inguinalis

Submitted to the examination of

the Provost, Trustees, and Medical Faculty

— of the —

University of Maryland

— for the —

Degree of Doctor of Medicine

— by —

Sam'l Weisel of Maryland

1832.

Hernia Inguinalis.

After listening with patience and attention to the various topicks which have been so ably discuss-ed during the sepion which has just closed, Hernia is one among the number which particularly attract-ed me, as demanding the attention both of the Prac-titioner of Medicine, and Surgery. As it is a disease not un-frequent in its occurrence, and one too, liable to come under the observation of every one who may have the honour to be a member of the profepion, and as the life of the individual may depend upon his discrimination, it is ne-ceffary that he should be acquainted with the subject, so that on the spur of occasion he may be able to res-cue the unfortunate from the hands of death. It is this which more particularly attracted my attention to the subject, and I have on this occasion resolved to devote a due proportion of time to its consideration.

The first question relative to the subject that would naturally arise would be, what is Inguinal Hernia? Few words will expres its meaning. It consists of a tumour for-

med by some of the parts which belong to the cavity of the Abdoman protruding through the canal naturally formed for the transmition of the spermatic cord. It has received the name of rupture though improperly, for it is contained within the peritoneum which always formes the inner surface of the sac. And it receives different appellations according to the viscera protruding. The parts which mostly produce Hernia by being misplaced from the cavity of the Abdoman are either a portion of the Omentum or a part of the intestinal canal, and not unfrequently both at the same time are contained within the Hernial sac; but these are not the only parts that have been found to form the contents of some Hernial tumours, other viscera of the abdoman have been found protruding, but in less common cases. Therefore if the contents of the tumour be intestine alone it receives the appellation Enterocele; if a piece of omentum only, Epiplocele; and if both intestine and omentum contribute mutually to the formation of a tumour, it receives the name of Enteroepiplocele.

We may divide inguinal hernia into three divisions, reducible, irreducible, and strangulated. First of reducible

Hernia. In the first place it commences with a tumour at the abdominal ring which recedes and disappears as soon as the patient lies down, but appears again as soon as he is erect, and as it enlarges it proceeds towards the scrotum following the direction of the spermatic cord. From the great similarity to other diseases which occur about the groin, it is not unfrequently confounded with them, but there are certain circumstances by which we can distinguish it from all other swellings that occur in this region. So long as it remains in the sac, so long is it liable to be strangulated. It may however remain for a long time without any serious injury to the individual unless it becomes strangulated, and then his life is put in the greatest danger. Persons often, and particularly Women, submit to the inconvenience resulting from it, rather than expose themselves to the inspection of the Surgeon, but this is ~~rather~~ carrying modesty to a dangerous extreme. The hernia therefore ~~is~~ should be reduced as soon as posible, and a compress applied to retain it in its proper situation. For this purpose we use a Truss. Bandages of various kinds have

been invented, they show the ingenuity of their discoverers or inventers, but are attended with great inconvenience, and do not answer the purpose for which they were intended. Various modes have been proposed but all have proved ineffectual except the Truss, which is therefore to be had recourse to in the first instant, and even in Children where we hope for a radicle cure, it must be worn constantly for a long time.

The second division is where no stricture exists yet the contents of the sac cannot be returned: there are several causes either of which may produce this effect. The intestine and omentum from long and continued prepure, may be so altered in shape, and size, as to present insurmountable difficulties to its reduction; and again adhesions or tendinous bands may form which will baffle the Surgeon in his attempts to reduce it. During this period however the bowels perform their function well, and if the patient attend to them he will enjoy much comparative ease and comfort. Under these circumstances as it is imposible to accomplish the reduction by any posible means the only resource left for the surgeon is to apply a suspensory bandage.

The third division is that in which the hernia becomes strangulated, and it is this which more particularly demands the skill, and promptitude of the Surgeon, together with the speedy application of those remedies which have a tendency to assist him in relieveing the afflicted. The tumour which was before soft, and easy, is now tense, and painfull: This however is not only confined to the one part, but all the abdomen is similarly affected, the patient stands upright with much difficulty, a nausea and disposition to vomit is excited with some degree of fever, and if the intestine be not reduced which alone can appease these symptoms they become more terrible, and unless the existing prepare be removed, mortification will take place and death close the scene of distrip. The patient himself even before the surgeon arrives to his assistance, will place himself in a horizontal position and make pressure upon the part. As soon as the Surgeon arrives and has ascertained the condition of the patient, after having taken into consideration the causes of the strangulation, should immediately proceede to the application of those remedies which will assist him in accomplish-

ing the object desired. And the first thing is to abstract blood, and evacuate the lower intestines by an Enema. Blood letting is recommended by some surgeons to be carried ad deliquium animi, thinking by producing a general relaxation the hernia might be reduced. Others do not use the lancet with this view, but with a view of allaying inflamation and reducing the size of the intestine by empting its vessels, it will produce both these effects which are always desirable before attempting to reduce the hernia. After a due quantity of blood has been drawn, and ~~even~~ if syncope has occured the reduction by taxis should be attempted.

The patient is to be placed upon a bed in the horizontal posture, his legs brought together, and his thighs at nearly right angle with his body, with his buttocks raised, so as to favour gravity, and assist in reducing the hernia. The tumour is then to be grasped with one hand and with the fingers of the other, prepuce is to be made upwards and outwards. It should be gentle and gradually increased, but should not be carried to such an extent as to cause much pain, as roughness is the cause

of much mischief. And if the hernia should not be reduced by this procedure, the patient is to be placed in a warm bath untill there is a tendency to syncope, if this is of no further advantage it will afford ease. If a reduction cannot yet be effected we must next resort to Tobacco, this is administered either in infusion, or the smoke of it is given, the former is the most convenient mode of its exhibition. This however should be given with great care as it is a dangerous remidy if administered in a large quantity or of great strength. Persons who are accostomed to the habitual use of this narcotic will bear it of greater strength than those who are unaccostomed to its use. Some Surgeons think one trial of it sufficient, and I believe if it will be of any sersise it will produce its effects in a short time, and by perseverin in it would only be submitting the patient to greater danger. The next remidy is cold, Ice pounded and applied to the part will often produce a powerfull contraction, and it admits of reduction at once. We have heard the freezing mixtures spoken of, but we think them improper, the cold is a good remidy, yet it can

be carried to extreme. Cathartics are seldom used, and I think they are justly condemned, particularly when the intestine remains firmly strangulated, but there are cases in which they are admisible, as in entero epiplocele when the intestine has returned, and the omentum remains strangulated, or in simple strangulation of the omentum. But as we cannot accurately determine when the intestine is free from the stricture, we should entirely dispense with them.

If all these remedies fail, the surgeon has but one resource left him, and that is an operation, which then becomes indespensably necesary, for the relief of the patient, but at what particular time it becomes indespensable for the safety of the individual is very difficult to say. Some Surgeons advise that the operation should be performed without delay, that is previous to the accesion of inflamation or gangrene. The state in which we shall find the parts cannot be judged of from the symptoms, or the length of time which has elapsed from the occurrence of the strangulation. There are some cases so urgent, that it is not advisable to lose any time

n the trial of means to effect a reduction, the delay of a few hours may cut off all hope of success, when an operation may have saved the life of the patient. Therefore we should rather resort to it too early, than too late. The anatomy of the parts concerned in inguinal hernia should of course be well understood by the surgeon, before he attempts the operation. The operation therefore being determined upon, the patient should be placed upon a matrass on a table, his shoulders and hips are to be raised with pillows, so that the abdominal muscles may be completely relaxed. We then commence the operation by making a free incision, commencing a little above the ring and carrying it down to the bottom of the tumour. By this incision we divide the skin and common cellular substance, which brings the knife in contact with the coat formed by the fascia superficialis. A portion of this is to be raised with a pair of dissecting forceps and cut through, then a director introduced we divide upwards towards the abdominal ring, and downwards towards the pubes, this incision brings in view the cremaster muscle, divide this which will bring in view the coat formed by the fascia propria

nd last to the coat formed by the peritoneum itself.
These are all to be divided with equal care and attention.
The last and most important incision is the division
of the stricture. This may occur at three different
places, either at the external, or internal ring, or in the
neck of the hernial sac. The finger of the surgeon
should be introduced for the purpose of ascertainng
its exact situation, and if it is found to be at either
the external, or internal ring, a probe pointed bistory
should be conveyed on the point of the finger to the
place of stricture, which must next be divided, in
doing this care must be taken to avoid wounding the
epigastric artery, and to avoid it, the knife should be
carried directly upwoid inclining it slightly inward
and by doing so we avoid it. It sometimes runs on the
outside tho' this is seldom the case, yet as it sometimes
hapens it will be proper on all occasions to cut as above
directed. It has been advised that if it be posible to effect
the return of the intestine, without cutting into the sac
it should be done, as it will save the patient much
pain and avoid all danger that would result from.

- extensive opening into the abdomen which would
most probably cause peritoneal inflamation. This we think
should not be considered, but in every case divided, and in-
deed it sometimes becomes indispensably necessary, as the
stricture may exist in the neck of the sac itself. We
may sometimes find that adhesions have taken place be-
tween the intestine and sac, if they be extensive we should
divide them, but if they be small and there is diffi-
culty in dividing them, we may cut of small portions of
the sac and leave them on the intestine. When they ex-
ist near the neck of the sac, it is an operation of extreme
difficulty to divide them. The condition of the intes-
tine should be ascertained before it is returned, and in-
deed it is sometimes difficult to accurately determine
its condition, if it be in a healthy state it is perceived
to be of a healthy red colour, but if it has been strom-
-gulated for any length of time, or if it has been light-
-ly pressed upon at the stricture part, it becomes of
a brownish hue. Under these circumstances one un-
-experienced might be induced to think the intestine
mortified, but this is by no means the case.

Mortification is marked by separate spots of a black colour, the intestine yields to pressure, and is ruptured by little force, it also emits a very disagreeable odour. By these symptoms we can distinguish actual mortification. It is a matter of so much importance to decide whether the intestine is, or is not, alive, that we should pay particular attention to every circumstance that would throw the most light upon the subject. If it is decided that mortification has taken place it then becomes a very important question to decide what is to be done. If it is confined to a very small space the intestine may be returned into the abdomen and no danger is to be dreaded, that is, provided we are careful not to lacerate, or rupture it. It would appear to one unacquainted with the subject, that there would be much hazard from the part sloughing and the contents of the intestine passing out into the cavity of the abdomen, but this will seldom, or never be the case, as adhesions will form round it in a few days, nay hours. We may sometimes find an aperture in the intestines, and if it be extensive we think it should be closed before it is

returned, otherwise the faecs will be thrown out into the cavity of the abdomen before adhesions could take place, and the life of the patient endangered by peritoneal inflamation. And again it sometimes happens that the whole cylinder of intestine is so much mortified, that it would be endangering the life of the individual to return it in this state. What then is to be done? It has been recommended by Mr Cooper that the whole of the perished part should be removed, and the parts united by suture, then returning it to the mouth of the hernial sac, is to be confined there by a ligature, so that it may be brought out and examined if necessary. Surgeons however of a more modern date have, and I think very justly, opposed this practice strenuously, and advise that the mortified part should be left protruding, as there is a probability after the parts have sloughed, that the orifice will contract and the faecs resume their natural passage. This however requires patience, and time, as this desirable change gradually takes place. After granulations begin to form around the external

pening we should close it by means of a compress, this however sometimes produces symptoms of strangulation, if so, it must be removed, and the parts suffered to escape, and again apply it. By ~~thus~~ persevering we may eventually accomplish the object desired, and thus relieve the patient from his unpleasant situation. We will now say a few words relative to the Omentum. This is ~~sometimes~~ also found sometimes quite mortified, and when in this state, there can be no hesitation in removing it by making an incision through a ~~healthy~~ part. But by making the incision through a healthy part hemorrhage may occur which should be arrested with animal ligatures before it is returned within the Abdomen. It was formerly the custom with surgeons to pass a ligature around the portion to be removed, and thus remove it by producing sloughing, this they did lest hemorrhage might follow an incision. This was only reproducing the mischief which was the object of the operation to relieve. In cases where the condition of

the intestine will admit of immediate reduction it should be done without delay, and then the edges of the wound brought in contact and retained by means of adhesive straps and sutures. The latter however should be avoided if possible, as they produce much irritation. The patient should then be placed in a horizontal position. If inflamation supervene, venesection, low diet and rest must be enjoined.

An Inaugural Dissertation on the
Modus Operandi and Therapeutic
Application of Cathartics
Submitted to the Examination of
the Provost Trustees & Medical Faculty
of the University of Maryland
for the Degree of Doctor of Medicine
by John. G. Pethebridge of Balt. City
Submitted the 9th of March 1832

To John. P. Mackenzie M. D.
My Friend & Preceptor
this is
Respectfully Dedicated
as a
Slight Evidence of the Respect-
which
I Entertain for his Talents & Character
Jno. F. Fetherbridge.

In the different Sciences with which men are acquainted there is not one, in which it's notions differ more than in that of the Science of Medicine. In proof of this assertion we have only to refer to its History. The nature of Fever for instance has been a prolific source of the Hypothesis of Speculative men. It was asserted by the great Father of Medicine that Fever was a Sanative effort of nature. To expel that from the System which if not so disposed would produce a deleterious influence. Thus for a number of Years was a dogma, which no one thought of doubting. Galen who succeeded Hippocrates defended & propagated it with all the zeal & Eloquence that he was master of. this theory Even continues until the days of the celebrated Sydenham. who also believed it and in whose writings we may find language which this naturally gave birth to.

In the Seventeenth Century Boerhaave came forward in the Medical world. and instead of the long received

doctrine of Fever. Offered that of his own viz that
it depended upon a Sentor or viscidity of the blood,
this had its day but destined like the former it flourish
d for a while then sank into Oblivion. Then Stahl
Hoffman & Cullen brought forward their theories of its cons
sting in a Spasm of the living fibre. Brown
Darwin succeeded these again. and fever was now made
consist in an Accumulation or Diminution of Excitab
lity, after these came forward pathologists, who said
fever was merely a Simptomatic affection depending
pon some local Inflammation. Some locating the
upposed Inflammation in the Liver. others in the Pan
creas. Rahn said it was owing to an Inflammation
f the digestive funtions generally. Broussais to the Muc
ous membrane lining the Intestines, & Clutterbuck
ating the Inflammation in the Brain —
And Even in the Nineteenth century, Pathologists
differ so much respecting the nature of Fever that
we almost fear that it will for Ever remain
an Arcanum Naturæ. Nor is Fever the Only

disease which has puzzled physicians in all ages. Asthma might also be adduced, as a disease upon which there has been and still exist great contrariety of opinions. Spasm. Effusion. a morbid state of the Pneumo Gastric nerve. & Congestion are some of the many theories which have been advanced by Pathologists.

But while some physicians have differed on some topics. We are happy to say that there are others upon which they have universally agreed. amongst which we know none. which stands more conspicuous than that of the Beneficial Influence of Purgatives; by almost universal consent they are admitted to be the most important agents. that we possess in the preventing & curing of diseases. Choosing then the Modus Operandi & the Therapeutic Application of Cathartics as the theme of my dissertation I can not expect to offer any thing new upon the subject. for if there is in medicine any thing that is thread worn it is certainly this. I can only repeat some little of that which is already known.

ns which I shall do in a concise manner. I shall
first speak of the manner of their Operation & their
their application in the curing of diseases.
Cathartics are those medicines which quicken or in-
rease the Evacuation from the Intestines. or which wh
n giving in sufficient quantity produce purging.
ese agents are divided into what are called Laxatives
Purgatives. the former of which Operate so mildly
t they merely Evacuate the contents of the Intestines.
ithout occasioning any general Excitement in the
dy. or Even Stimulating the Exhalent vessels of the Can
l. but the latter are more harsh in their Operation.
asmuch as they produce considerable Irritation to the
ose vessels & Extend their Effect to the System gene
ally. when these Effects are more violent they
e farther distinguished by the Epithet of Drastics.
he Evacuating the Contents of the Intestines is produced
y Cathartics in several ways. the following are we
think the manners in which they operate. first
by meeting in the Stomach & Intestines something

which unites with it & by so doing communicates to
a cathartic property. it is in this manner that
several Absorbents act. (magnesia for instance when
ken into the Stomach would be inert. were it not for
acid with which it meets. Secondly. by Stimulating
the Muscular fibres of the intestines whence their pe
ristaltic action is increased and the contents of the Bowe
ls more quickly & completely discharged. Thirdly By
Stimulating the Exhalent vessels terminating in the
Inner coat of the Stomach Intestines and the mouths of the Ex
cretory ducts of the mucous glands. by which an
increase flow of serous fluid takes place from the former
& a more copious discharge of mucous from the
latter. 3 By Stimulating the neighbouring viscera
the Liver & the Pancreas. so as to produce a more
copious flow of their Secretions into the Intestines.
different Cathartics posses different power in relation
to the several modes above Specified. Some as Ma
gnesia. Manna. Sulphur &. would appear to act
by merely Stimulating the Muscular Fibres of the Intes

tines without producing any serous Exhalation. we have
merated Magnesia with these latter articles. but we
ink it more properly belongs to the first Class.
Bread made of Unbolted flour. which has recently
n so much Extolled in dyspeptic affections. owes
cathartick properties to the rough particles which
contains which by friction Stimulate the Muscu
r fibres of the Intestines. does Rhenbarb act also
this way they gently Stimulate the Muscular tunic
thout Increasing the Secretion from the vessels.
The Cathartics that act in the this way above m
entioned were called by the Ancients Hydragogues.
he whole of their action is nearly Expended upon the Se
cting vessels. So much so indeed that Dr Cullen thou
ht that they might operate Solely in this way without
Increasing the peristaltick Action. But as Dr Murr
y. Says it is rather improbable that any medicine
should Stimulate the vessels & not at the same time
the Mobile fibres of the Intestines. to this class
may be referred the neutral Salts. which Induce

preternatural quantity of serous fluids to be thrown into the
anal which dilutes its contents and by its Operation
ded by the Stimulus of the Saline particles. accele
te the vermicular Motion. to the fourth Class maybe
laced the Mercurials which act chiefly by Stimula
ing the neighbouring organs. particularly the Liver.
ence there is a greater quantity of bile thrown into the
stines. which by its diluting properties but chiefly
its Stimulating the Muscular coat. produces an Ex
cuation; from the above it will be seen that
se important remedial agents. act differently and
at Judgement is absolutely necessary. in order to
escribe Successfully. But they not only diff
in this respect. while some have their action confi
ned to a particular part of the tube. others again
crease its action through its whole length. aloes
ustrate the first. for we know that its Stimulating
ffect is almost if not Entirely confined to the Rectum
Some again as the neutral Salts & Colocynth act
from the Duodenum to the Rectum even to its Extremity.

again Some act Slowly others more quickly Some
act Slowly others more quickly. Some are liable to occ
asion nausea and Griping and in large doses tend
mus. while others operate Effectually without these
disagreable consequences. In concluding this
art of my Subject I would say that the Effect of a purga
tive is not confined to the part to which it is applied
but on the contrary its influence is Experienced in the
most Remote parts of the System. Having cursorily
seen the Modus Operandi of Cathartics. I now pass
to make a few remarks on their application in the cur
ing of diseases. Their Utility in many of the
diseases to which man is subjected has been admitt
ed in all ages. the Ancients were fully aware of
the good that is to be derived from their administ
ation. But not until the publication of Dr. Ha
millons valuable Essay on the Subject were they made
use of in many affections which are now found to
yield to their powerful Influence. Ever since the
appearance of his work. they have been gaining

round and at present they occupy a Situation of
which no other class can boast. nor is their good Effect
to be wondered at when we take into consideration
the important influence which a normal condition
of the Stomachic Viscera upon the whole Machinery of
Man. Fever. in Fever the peristaltic
action of the Intestines is considerably diminished. Con
sequently there is an accumulation of feculent matt
er which adds fuel to the flame, and frequently is
the cause of the Excitement which cannot be subdued
by the Lancet. and until the Intestinal Canal is re
lieved of its load. the disease will increase. hence the
necessity of purgation. Sometimes it will be necessary
to keep up the action of the Medicine until the healthy
state be restored. We believe that in almost all fevers
purgatives are necessary. and think One reason why
many fevers pass into the Typhoid State is. that Suffi
cient purgatives have not been not used. In many in
stances their use is to precede by the Lancet. as
in the Inflammatory forms of this disease. In the Bilious

mittings of our Own Climate. after the Excitement has
subdued by the Lancet, Mercurial purgatives are ad
ministered with the most happy Effect. in fact we know
no Treatment. which is calculated to restore the System
its wonted State so soon as the above. Yellow Fever
is is no more than a higher grade of the preceding. there
more congestion in the first Stage. & if reaction takes
ace the Excitement is greater. after the tone of the Sys
m is reduced by bloodletting. Mercury giving with the vie
t Only of a Cathartic. but also to affect the System
nerally. will be attended with the most Beneficial
sults. As it respects the intermittent form of disease
would here remark that the reason why they are so
stinate & so frequently attended with Indurated
ers & Spleens. is that the tonic plan has been comm
nced before the System was prepared for its reception.
purgatives should be given until the Alvine Evacu
-ations assume an healthy appearance. then
tonics will complete the cure. in the first
Stage of Typhous. purgatives ought to be given

until a decided impression is produced. but in the latter
stages the mildest Cathartics are to be given. In
the Exanthematous form of fever they may be admin
istered with success. or rather with benefit for after the
disease has once commenced little or nothing can be done
to stop its course. yet by a due attention to the Intestines
we may prevent the disease from assuming the height
to otherwise would. in these diseases Cathartics pro
duce their good Effect in two ways. first by their rem
oving the vitiated Secretions & secondly by translating
the Irritation from the cutaneous to the Intestinal
capillaries. in Small Pox Purging is next to evil
it allays the Heat reduces the Excitement & lessens
the crop of pustules. In Scarlatina Hamilton
says of Purgatives in the highest term. if carried to
sufficient Extent they will prevent the dropsical swell
ings. so frequently observed after this disease. Empirically
this is a disease generally occurring in bad habits.
such as those who live an indolent life at the
same time addicted to the pleasures of the Table.

articularly the use of Stimuli, the Inmaria is
always in a deranged condition, and must be rectified
fore the disease can be cured. Phlegmasia in these
fections after the use of the Lancet. Purgatives are
the most powerful remedies we have. for as
ove mentioned they remove that from the System which
eps up the Excitement. nor are they useful in this
anner only. but by Stimulating the Exhalent vessels
hey produce a depletion Equivalent to a Small blee
eting. In Hydrocephalus Internus which is now
most universally admitted to be an Inflammat
on of the Arachnoid Membrane. Purgatives are
dispensable. after general & topical bloodletting
purgative should be given the operation of which
hould be kept up until the Excitement subsides.
In Phrenitis which is similar to the above pu
rgatives are also indicated. in a word the treatm
ent of the two diseases is nearly if not precisely the
same. General & Topical bloodletting carried
to as great an Extent as is admissible succeeded

cold applications and Cathartics and when the
more Inflammatory Symptoms have subsided a blister
may be applied advantageously in the different
species of Pneumonic Inflammation purgatives are
very Important Item in their treatment. They are
to be preceded by the Lancet. When they come into play.
would here remark that it is the opinion of Dr Chap
man that these affections will not be as purging as
are as the other Inflammatory diseases. In that Com
mon form of the disease called Pneumonia Bilio sa
Professor Potter speaks of them as in the highest
terms. The Hardness of the pulse which are find in this
disease cannot be subdued by the Lancet as it depends
on the Intestinal Canal. which is now filled with
bilious & Secretion. of Bile. for the removal of which
course of purgatives must be instituted. Inflammation of
the Intestinal canal is divided into such as affects the
Internal or Mucous Membrane & into that affecting the
Muscular & Peritoneal coverings. the former of which
is called Dysentery & the latter Enteritis.

Dysentery is sometimes of a Typhoid character and at
other times it is violent Inflammatory. Sometimes it is
complicated with the Effects of Malaria, at other times
it is Simple. a disease so varying must of course requ
ire a variety of treatment. but generally speaking purg
atives are called for. particularly in that species, com
plicated with Miasmata, here we know of no better
treatment than that suggested by Dr Johnson viz
giving of Hydr Submuriae gr XX. which acts like a
charm upon the whole System. in Enteritis after
general & Topical blood letting. we would give the same
purgative in the same dose. it might be objected to
this treatment by saying that whereas the Intestines
are already in an Inflammatory condition, and as
the action of the purgative is to increase the vermicular
motion. the Evil would only be increased. but we would
answer the Objection by saying that more danger
is to be apprehended from permitting Irritating
feculent matter to remain in contact with
the now Extremely sensible Intestine than would

due from the action of the Medicine. besides this Evil
n be Avercome by combining with it a portion of
Opium. for this Compound not only acts as a purgative
ut it also produces a per diaphoresis. relieves the
Excruciating pain attending this disease. & restrains
he Inordinate action of the Intestines. In Acute
Hepatitis our treatment must Commence with Active
Depletion. general bloodletting carried to the Extent of
leening the pain. to be followed with cupping or leach
ing of the Hypochondriacs. in this disease there is an
reased Secretion of Vitiated bile thrown into the intestines
hich must be purged off. by the neutral Salts. and not
y Calomel. after the disease has assumed a more chronic
orm. then Mercurials may be administered with benefit.
Dropsy this is a disease which was formerly placed am
ng the Cachexia. it was supposed by the ancients to
be owing to a laxe State of the fibres or a diminution of
absorption. Dr Rush was the first I believe who
proved it to be a disease dependent upon an
Increased action of the Heart & Arteries. or in

in words that the capillary system is in a State an
logous to that which they are in. in Inflammation
Pathology being known the treatment is Obvious.
a Strong constitution bloodletting is indicated aft
which purgatives are to be given. in a more debi
cate Habit we will have to dispense with the Lancet:
trust chiefly to some of the purgatives. it is true
some practitioners depend almost Exclusively on lance
in the treatment of this disease. but we think the abo
is preferable. Dyspepsia there are Evidently two
distinct pathological conditions of the System in this disease
the one the digestive organs are in an atonic State. but
the other they are in a State of Sub acute Inflammation.
Symptoms by which we distinguish one from the other are
following. in the first there will be a white or furred
gue little or no pain in the Epigastric. bowels Constipated
the other the tongue is red pain in the Epigastric. pulse
bile. bowels diarrhea giving rise to what is called
Dientery. in the first purgatives must be given com
bined with tonics. for the mental depression alle

ing this disease is we believe owing to faeces being
t up in the large Intestines, and which can be rele
ed only by purgatives. it is here that the bran bread
f so much service. in the second species the treatment
st of course vary. if purgatives are used at all they
st be of the mildest kind. tonics here are inadmissi
le. Hypochondriasis, is always attended with a tor
condition of the bowels. which can be relieved by noth
g else but purgatives, Jaundice in this disease
have sometimes to bleed and use the warm bath. but
gatives are always called for. particularly the merc
ials, In the different species of cholic purgatives
inestimable. the common cholic is sometimes owing to
proper Ingesta having been taken. if it has not been in
long an Emetic will be advisable. but if it has passed
the bowels a cathartic will be necessary. in Cole
Pectonium violent constipation Exists. and until this
overcomed no relief can be Expected. here the Intestines
are in violent spasms. large doses of opium must
be combined with the purgatives, Calomel & Opium

...al fluid is relieved & cured by purgatives. In Ap-
...plexy nothing must be permitted to usurp the place
...the Lancet. we must bleed. bleed & bleed again
...after this however an active cathartic or a Sti-
...mulating Enemeta will be Judicious. Palsy is noth-
...g more than a minor Species of Appoplexy. catha-
...tics here are Inestimable.

Having now concluded my dissertation it only ~~now~~ rem-
...ins for me Gentleman to take my affectionate leave of you all
...e pleased to accept of the Warmest Effusions of my Heart for
...e repeated acts of Kindness which I have received at your
...ands. but more particularly for the inestimable Information
...hich I have derived from your Invaluable Lectures. that Long
...Health & Prosperity may be yours in this world & Happin-
...in the next is the Ardent wish of your pupil

Jno F. Pelherbridge

N.B. It is hoped that the hasty manner in which the
above was written will be a Sufficent apology for
the Many Errors

J. F. P.

large doses succeeded by Castor Oil is we believe the
most treatment. in Bilious Colic or that Species
which is dependent for its Existence on a deranged State
of the biliary Organs. we think two opposite conditions
of the System Exist. in the one there is a deficiency
of the Biliary Secretion and the Intestines not receiving
their accustomed stimulus passes into a Spasmodic State. in the other
there is a preternatural Secretion of acrid bile which
coming in contact with the delicate Surface of the Intestines
produces Colic. in Either case Mercurial purgatives
are indicated this in many instances, the Lancet
must be premised. Illeus is not a disease differing
from common Colic in nature. but is Colic in a higher
degree. in this disease patients sometimes passes several
days without an Evacuation our Success depends Altogether
upon our opening the bowels. Castor Oil. Strong
decoctions of Senna & Manna are sometimes given in
the strongest doses without Success. In these cases we
have to resort to our most active Cathartics I have
known Croton Oil to be used Successfully. Injections

Tartrate of Antimony have been recommended and
violent cases we have no doubt of their being succe
ssful. In the verminous affections of children a purga
ive is often the best Anthelmintic that can be given
almost all cases a purgative should be given both
ore & after the proper Anthelmintic. in Marasmus
rfessor Baker says that mild purgatives are used
ith great advantage Rx. Hydr Submur gr ½. Pulvis Rhei
V. ~~Chlorosis~~ Chorea. Dr. Hamilton treated this disease
llogether by purgatives, but we think after the Intes
tines have once been brought into a Soluble condition
onic Remedies will be found more Efficacious. in the
fferent affections of the Uterine System purgatives
e also valuable. Suppression of the Menses may
use from different causes. it may be dependent upon
e Uterine System or the System generally. when it is
ing to a torpid condition of the Uterus. Such purgatives
stimulate the Rectum & the neighbouring organs will
bring on the Secretion. Chlorosis or Green Sickness
one of the Effects of an unhealthy State of the Mens.

An Inaugural Dissertation on Hypochondriasis

Submitted
To the examination
of the
Provost
Trustees and Medical Faculty
of the
University of Maryland
on the day of March
1832
For the degree
of
Doctor of Medicine.

By James S. Naudain
of
Delaware

To

N. Potter M.D. — R. W. Hall M.D.

M. McDowell M.D. — N. R. Smith M.D.

S. Baker M.D. — E. Geddings M.D.

and

J. J. Ducatel Esq.

This essay is respectfully inscribed as an expression of the high respect entertained for their extensive scientific acquirements, and as a slight acknowledgement for the much useful and important information, which they have so ably and diligently inculcated; and which will ever be had in grateful remembrance

By their obt Servt

The Author

In conformity to a regulations of the University of Maryland, requiring that each candidate for graduation should compose a Thesis on some subject relating to his profession, I have chosen the disease Hypochondriasis as the subject of my inaugural dissertation.

I have not fixed upon this disease on account of the number of cases that have fallen under my observation, but rather that I might instruct myself by making my researches on this interesting subject.

When I consider my limited experience and total inadequacy to offer any original remarks, I feel no little diffidence in thus subjecting myself to the criticism of so learned a body; yet conceiving that a judicious compilation is the most that can be expected or required of a mere novice I have ventured to submit my little "Coup d'essai" in Medical composition to their inspection

The disease Hypochondriasis so named by the ancients from a notion that the affection was confined within the hypochondriac regions is derived from the two greek words ὑπο, sub, under, and χονδρος cartilago, a cartilage, signifying under the cartilages or ὑπο-χονδριον the hypochondrium = Hippocrates enumerates no less than nine diseases of the hypochondrium among which we find the "affectio hypochondria" or Hypochondriasis, a short dissertation on which is the object of the following pages It is known by a variety of names as the Vapours, Low spirits, Spleen &c It affects nearly all conditions and grades of mankind: the inmates of the hovel as well as of the palace are alike liable to its enervating influence, which too often brings the noblest work of the Creator to a level with the brute causing a loss or perversion of that attribute which alone distinguishes him above all creatures:

The importance of this disease will be duly estimated, while the difficulty of its investigation is sufficiently obvious - There being such a continual reciprocal action between mind and matter as to render its causes often inscrutable or at least perplexing

The causes of this disease being both corporeal and mental, we shall for the sake of perspicuity Enumerate

first the symptoms denoting corporeal derangment and afterwards mention some of the mental phenomena

Corporeal Symptoms

Some impairment of the functions of the stomach and digestive organs is generally first observed. as nausea and vomiting, dyspeptic symptoms accompanied often with obstinate constipation and sometimes diarhoa anorexia or loss of appetite, acid eructations, flatulency cardialgia, pain xpersed to the epigastrium sometimes to the hypochondriac regions, acid or bitter taste in the mouth, copious flow of pale coloured urine accompanied with pain, difficult respiration palpitation of the heart, pain in the bowels &c

The pulse is very variable more generally slow and languid not unfrequently irregular and intermitting

Mental Symptoms

Combined with the above symptoms we have the infinite diversity of mental hallucinations which is peculiar to this disease — Gloomy ideas possess the patients mind, he is greatly concerned with regard to his own health, and generally imagines to himself all the "evils that flesh is heir to";. He is sad, dullen, languid, and inactive, is fond of solitude & retirement

and when in company he discourses of nothing but his own infirmities, he anticipates danger or death from the most trivial occurrences, and looks upon all future events with horror, fearing death though seeming to desire it,

"Sheds o'er the scene a voluntary gloom,
"Requests oblivion, and demands a tomb.

No matter how chimerical his whims and apprehensions may be, yet he insists on their reality with the most persevering obstinacy, he even imagines himself to be dead, and gives orders for the performance of his obsequies with the most imperturbable gravity.

The foul fiend of despair, not content with harrassing its miserable victim by day, follows him to his couch and there he dreams of wretchedness ten fold greater than the realities of vision, would allow him to conceive of,

"What anxious cares the poor man's bosom vex
"In dreams torment him and by day perplex.

Nor does the frightful old hag night-mare fail to bestride his troubled breast, and pinion her victim without mercy, while "Queen Mab" drives her fairy chariot furiously to and fro across his racked brain

Pathology

The opinions of authors respecting the pathology of hypochondriasis appear vague and contradictory

Boerhaave attributes it to a certain morbid condition of the fluids termed in those days "attrabilis"

Hoffman supposed that the peristaltic motion of the bowels is retarded by spasms— Cullen classes it among the neuroses, order Adynamia and he defines it to be indigestion languor, sadness, and fear from uncertain causes in a melancholic temperament— Sydenham attributes it to a confusion of the spirits— Cheyne supposed it to arise from some obstruction of the abdominal viscera— Sir A. Crichton places it in the class neuroses, order Vesania, and he defines it, "error respecting a person's own make or form with anxiety apprehension and dread"— Good in his "Study of Medicine" classes it under the head neurotica order Phrenica— Post Mortem examinations have discovered the brain and some of the abdominal viscera affected: The brain has been found to be harder than natural and water effused beneath the pia mater and in the ventricles: The transverse colon has been found much displaced, so low

down even as to reach the pubes, the mesenteric glands have been found inlarged and indurated but it is not evident whether these affections shall be regarded as the causes or effects of the disease. The opinions of many celebrated writers with regard to the pathology of this disease have been recorded, no more conclusive or satisfactory than those we have mentioned, and we are forced to the conclusion that until the action of the mind upon the body shall be better understood. we must remain in comparative ignorance of the true pathology of this and other diseases connected with the Phenomenon of intellect

Causes

We shall arrange the remote causes under two general heads, Those that act through the body or parts of it as the Stomach &c, directly, and such as act indirectly through the medium of the mind:

Among the first we shall mention Irregularities of diet, bringing on a disordered condition of the digestive organs, giving rise to flatulency, cardialgia dyspepsia, constipation or diarhoea &c

An indolent. Sedentary life is a prolific source of this disease

inasmuch as a certain degree of exercise is absolutely necessary to a healthy digestion, without it the stomach becomes debilitated and languid, the heart and arteries share in this languid state of the stomach and a debilitated condition of the whole nervous system ensues

Long continued watching or wakefulness - may be reckoned as a remote cause of hypochondriasis, all the animal functions being still in operation, become at length fatigued notwithstanding the most refreshing aliments are taken, the individual soon finds himself weak, tired, and unfit for any intellectual exertions, "for ingested nourishment (Says Dr Darwin) however rich or light cannot be elaborated into this ultimate perfection of animal spirits, to restore the necessary losses of this most subtile fluid, unless the wearied body be also recruited by sleep"

Exposure to the Vicissitudes of temperature — If a person in good health expose himself to the cool air of a frosty morning he will experience no ill effects from it, on the contrary the system will be strengthened, the stomach invigorated and digestion will go on more rapidly, the appetite will be sooner excited; but if one of a weak constitution in a delicate state of health, be exposed in a similar manner, the digestive organs will be debilitated and

indigestion with its train of consequences will be induced: a cool and moist air is still more prejudicial to persons in delicate health, the moisture being a good conductor of the animal heat, leaves the surface in a cold and debilitated condition.

Use of Tobacco — this pernicious plant is a prolific source of many of our nervous disorders. it abstracts the quantity of saliva so necessary to the proper assimilation of the food and thereby giving rise to imperfect digestion.

Excess in Venery — Galen observes "that those who use excessive venery, not only fall away in their whole habit, but even become dry, emaciated, pale and shew a hollowness of their eyes" and Hippocrates "non tumet, verum tenuis est aridus ac debilis maxime vero circa claviculus extenuatur, et vultu vehementer gracilis est, oculique admodum cavi"; and when we consider those continual and tormenting fears that commonly attend the votaries of Venus, their unceasing dread of the venereal disease we are not surprized that so many become hypochondriacal, "I have (says van Swieten) visited numbers who would not allow themselves to be persuaded by any reasons that they had nothing to fear from the lues venerea, but have even forced themselves

into the hands of quack practitioners, have undergone repeated Salivations, and at length have perished"

The sudden cessation of some periodical or habitual discharge often causes this disease as that of an issue, piles, or a chronic ulcer, or the repulsion of some cutaneous eruption. In the predisposed very slight causes may occasion this malady, as any thing that deranges the functions of the stomach or interferes with the nervous system — for both Melancholia vera and hypochondriasis may be the result of a predisposing constitution, or both may be brought on by any of the foregoing causes where no such predisposition ever existed — The temperament called Melancholic is characterized by a lean and dry texture of body, muscles small and rigid, brownish yellow complexion, dusp black and coarse hair, Eyes sunk in their hollow sockets, sallow skin, large prominent veins particularly in the arms and hands with a tendency to solitude and private musing and not unfrequently it precedes this affection but Sir A. Crichton correctly remarks "that even in those whose health is much impaired true Melancholy seldom arises, except mental causes of grief and distress

join themselves to the corporeal ones; and this Constitutes one of the characters which distinguishes Melancholia vera from hypochondriasis" the former may be said to be always excited by mental causes and consists of various phenomena of grief despondency and despair; whereas the latter most commonly arises from corporeal causes, and its mental phenomina consist of erroneous ideas entertained about the patients own make of body — There are many other causes that may give rise to this disease, which it is perhaps unnecessary to enumerate, as too great repletion of the stomach, too frequent use of Emetics, opium, tea. coffee &c In short we may conclude that whatever tends to impair the functions of the digestive organs or depress the nervous system being long continued may finally occasion this affection

Mental Causes

We shall next consider those causes that operate through the medium of the mind — The influence of the mind upon the body, in causing as well as curing diseases, has been admitted in all ages, but how this influence is effected still remains in

obscurity, and perhaps will never be satisfactorily explained, for where is the man however erudite he may be, however far he may have carried his physiological researches, who is able to elucidate the operations of the intellectual faculties? great indeed is the beneficence of the Creator; who while he has endowed man with judgment and abilities to seek after and acquire knowledge, has fixed his limits, and reserved as his sacred arcana things to be known only to himself and controlled by his omniscient will alone

Learning then a lesson of humility we are taught that the proper way to attain wisdom, is carefully to examine cause and effect to call in our own judgment and not indulge in vain speculations

The influence of the intellectual upon the corporeal functions, is evident from numerous facts, and none more striking than the effects that daily incidents have on our own systems; As however we are chiefly concerned with those passions that tend to interfere with the functions of the digestive organs we shall proceed to enumerate some of them

All pleasurable sensations as Joy, Love when requited &c &c appear to act as a stimulus to the Stomach,

giveing it tone and increasing its digestive powers and thus buoy up and exhilarate the whole economy while the depressing passions have an effect quite the contrary; the Stomach shares in every disagreable or painful reflection, as is exemplified, in the idea of certain kinds of food, for which we have conceived a disgust, causing nausea and vomiting=

Fear, Grief, Anxiety, Anger, Disappointed love &c are causes of hypochondriasis. Many cases are related by authors of the various effects of these different passions, the disease, arising from these causes, may at first perhaps be considered as a mental Malady, but when long continued, the effects upon the system become evident, the action of the heart and arteries becomes depressed, Stomach disordered, dyspepsia with its accompaniments is induced, the whole system at length participates and a general languor induces

Intense Study— Long continued and intense application of the mind has too often resulted in the destruction of health, Therefore Celsus has remarked "Literarum discipliname, majori studio agitatum, animo praecipue omnium maxime necessarium esse, sed corpori inimicam" Intense Study has a two fold action, by depriveing the

body of exercise and the mind of repose; both so necessary to a healthy digestion — The stomach and digestive organs then appear to be the chief centre from which emanate most of the symptoms of this disease; they are the source upon which the whole system depends for support, and when disordered, a morbid action is diffused throughout every part of the body

Diagnosis

Hypochondriasis often counterfeits other diseases so as sometimes to be with difficulty distinguished from them. It is as various in its appearances as the hues of the Chameleon or the Shapes of Proteus

It has been confounded with hysteria, but the difficulty of distinguishing it from this affection is not great however, for as Hoffman asserts, a strangulation of the fauces, a quick and difficult respiration endangering suffocation, loss of speech and motion are the proper and essential symptoms of hysteria but the hypochondriasis is inveterate and rarely so effectually relieved as not to be again easily excited Though many of their symptoms are the same yet they each have such as is essential to it

Dyspepsia is often complicated with this disease, and writers have endeavoured to assign certain diagnostic symptoms to each, Dr Cullen classes dyspepsia as a distinct genus of diseases and immediately after mentions it as a symptom of hypochondrias, Some writers tell us that "hypochondriasis prevails at an advanced period of life, and is more an affection of the mind than of the body whereas dyspepsia occurs from the age of puberty to thirty five and depends chiefly on debility induced by various causes;" but we are aware of cases of hypochondriasis having occurred about the age of puberty and cannot accept this definition as satisfactory, yet we think there is a difference between the two diseases, but cannot suppose that dyspepsia should be ranked as a distinct genus, the peculiar temperament of the individual his mode of life, and modifying circumstances together with the existing symptoms all being taken into consideration would probably lead us to a correct diagnosis

This disease not unfrequently counterfeits Melancholy and therefore Dr Cullen states, that in Melancholia vera there is an anxious fear and despondency arising from a mistaken judgment with respect to other circumstances than those of health, and more especially in the patient

being without any dyspeptic symptoms, he also remarks that in hypochondria "the symptoms of dyspepsia or the affections of the stomach are often absent, and in the same paragraph says that what he would "strictly name melancholia" is devoid of any dyspeptic symptoms but afterwards observes that there are generally some dyspeptic symptoms in melancholy,- here the illustrious Doctor appears to be somewhat inconsistent, or at all events his diagnostic criteria are involved in some little ambiguity, since two diseases are to be distinguished from one another by a symptom which generally occurs in one disease and invariably attends the other

Boerhaave considered them as the same disease differing only in degree, this opinion we may with the more safety adopt, inasmuch as our remedial agents should be directed rather to the symptoms, than to the name of the disease.

Treatment

However extravagant or chimerical, the symptoms of which the patient complains, may appear, they should never be treated by the physician as imaginary, on the contrary it is generally necessary to seem convinced

of all his afflictions, to ferret out the causes from which they arise, and to employ the resources of his science to overcome them —

The treatment naturally divides itself into that of the corporeal affections and into the moral management

A torpid and constipated condition of the bowels is not an unfrequent concomitants, it should be treated rather by gentle laxatives than drastic cathartics, soliciting periodically an evacuation, by regularly withdrawing at certain hours during the day, making voluntary and persevering efforts until it be accomplished; discharges established in this manner are more permanent than those elicited by strong cathartics, which after their operation generally leave the bowels as torpid as before —

To obviate the flatulency that so commonly occurs, we should make use of carminatives, as the essential oils spices &c. From the general torpor of the system the slow and imperfect digestion, acidity prevails to a great extent with the hypochondriac: Alkaline remedies should be administered as magnesia, carbonas Sodæ, Creta preparata &c Vomiting should be seldom resorted to, if any undigested article remain on the stomach, causing nausea and uneasiness about the præcordia, an Emetic

to effect its removal, would be proper.

The spasmodic pains of the head and stomach; of which the patient often complains, may be relieved by such medicines as opium, camphor, musk, assafoetida, ether &c substituting one for the other alternately as often as the patient may lose confidence in its efficacy.

Exercise should be recommended, riding on horseback is particularly beneficial if there be any visceral affection If the influence of Malaria be suspected the appropriate treatment should be resorted to, though an attack of intermitting fever has been known to cure the disease.

The warm bath is useful as a remedy for disturbed repose and wakefulness — Persons labouring under a depression of spirits often have recourse to the exhilarating influence of opium, or distilled liquors, and by this pernicious habit, entail on themselves those very evils which they desire to avoid, They should therefore be generally proscribed; or used with caution, like many other poisons, when under the direction of the scientific practitioner, they may be of infinite service in the removal of disease .... Attention to the diet of the hypochondriac is of great importance; any thing that has a tendency to become accescent, or flatulent should be interdicted

The aliment should be light, nutritive, generous and of easy digestion: animal food is the most proper with light farinaceous articles, the bread should be baked a day or two previous to its being used: the flesh of young animals is not so proper as that of the adult animals; the stomach should never be overloaded, nor permitted to become entirely empty: a glass of good Madeira wine will often assist the digestive powers of the stomach good brandy and water may also be used, but sparingly. Tea and coffee are generally improper; chocolate and the infusions of some aromatic plants, as sage ginger, Sassafras &c form very good substitutes for them

Moral Management

Soothing and gentle measures are more likely to succeed we should sympathise with the patient, attend to all his complaints and endeavour to gain his confidence, The numerous whims and caprices, that attend this disease, are often ludicrous in the extreme; Some conceiving themselves made of glass and are painfully fearful of being broken, another is a teapot and places one arm a kimbo by way of a handle while the other is extended to represent the spout

I know a man who at times insists on being cut open, in order to let out a Snake which he says is crawling about in his belly=

"Here we should endeavour to destroy the present impression, by associations still stronger, that may engage the attention of the patient, and thus by degrees presenting more objects to his mind, we may succeed in diverting it from being absorbed by one alone — It is necessary often to humour their false notions, and to persuade them that you are possessed of remedies that will effect a certain cure — Thus we read, in Van Swietan, that the famous Tulpius cured an excellent painter, who conceited that all his bones were soft like wax- "for he by no means exposed the patients fancy but only shewed the man of ingenuity: assuring him that his distemper had been described and was known to Physicians, and promising him a certain cure within six days if he would but observe the rules he should prescribe for him: thus by degrees he brought him by the third day to the liberty of standing on his feet, without stirring an inch, and by the sixth day inlarged him to the liberty of walking about — there the patient

admitted all his Physician ordered, because he thought him assured of the waxen softness of his bones and because he kept him so strictly from stirring for the first three days, that he might receive no damage from trying them beyond their strength. Many cases are on record shewing how successful physicians have been by indulging the false imaginations of their patients — thus we read in the "Diary of a Physician" of the wonderful effects of electricity, in curing a turned head!

This disease sometimes assumes a more serious aspect, the patient being oppressed with a general listlessness, and disgust, an irksomeness and weariness of life, often without any assignable cause.

Those who have spent the early part of their lives in active engagements, in the excitement and bustle of commercial enterprise, and retire to enjoy the pleasures of domestic quiet, having no mental resources, no taste for reading and social converse, and deprived of their accustomed stimulus, become dejected, weary of life, sink into despondency and often terminate their existence by suicide — a similar fate awaits those who have